

A HISTORY OF
WESTERN EDUCATION



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A HISTORY
of
Western Education

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PREFACE

SINCE THIS BOOK HAS BEEN WRITTEN FOR AMERICAN TEACHERS and prospective teachers and for all who share, by voice or vote, in the direction of our public schools, more space than is usually given in a general history of education has been devoted to the development of the American system. The aim has been to make the book practical and useful to those who must understand the needs and forces of the world if they are to give wise direction and to go forward. Every age tends to seem critical to those who live in it, but we can hardly be mistaken in thinking that we, today, live in an especially crucial time; and, in the resolution of its problems, education and the understanding which it is intended to foster, rather than prejudice and force, should determine our choices and control our actions.

Some of the best known of the older histories of education were mainly summaries of the theories and views of famous writers on education; others substituted the history of the great intellectual and emotional movements for the history of the schools; while some of the more recent and more institutional histories are chiefly chronicles of facts, events, and laws. The present book is an attempt to prepare a balanced account of the growth of schools and school systems and of the evolution of educational thought and doctrine upon a background of the general history of society and civilization. It has also seemed necessary to give attention to the growth of psychology and, more broadly, to the changing views of human nature because these topics have an immediate bearing upon teaching and learning. To do this in a book of the conventional length and within the compass of the capacity and interests of college students and prospective teachers has proved to be a difficult task; and the writer deeply regrets that he has not been able to find space for a fuller consideration of private education, adult education, and higher education.

The chapter bibliographies are intended to guide the further reading of students. It has not been thought necessary to document the work closely although many of the sources are indicated in the text itself. Dr. Louis E. Otte, Dean of Kansas Wesleyan University, assisted in the research for one of the chapters; and Professor Forest L. Shoemaker of Ohio University, by his critical comments, improved the text in both language and matter. Several of the author's past and present colleagues at The Ohio State University have aided the writer directly and also influenced him in less deliberate ways. The help of Professors Dan H. Eikenberry and Roscoe H. Eckelberry, and of Dr. James D. Teller, who each read portions of the manuscript and made useful suggestions, is gratefully acknowledged. To his students, over the years, he owes much and to his wife, who has heard or read almost every page, most of all.

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CONTENTS

PART I

1. PERSPECTIVE AND PROSPECT	3
2. EDUCATION IN ANCIENT GREECE	18
3. ROMAN EDUCATION	42
4. EDUCATION IN THE EARLIER MIDDLE AGES	58
5. FROM MONASTIC SCHOOLS TO UNIVERSITIES	80
6. THE RENAISSANCE IN ITALY	111
7. THE REFORMATION ERA	139

PART II

8. FROM HUMANISM TO REALISM	170
9. NEW VIEWS OF NATURE AND HUMAN NATURE	201
10. NEW SCHOOLS FOR OLD	225
11. NEW SYSTEM-BUILDERS: HERBART	250
12. NEW SYSTEM-BUILDERS: FROEBEL	268
13. NATIONAL EDUCATION IN FRANCE	292
14. NATIONAL TRENDS IN GERMAN EDUCATION	318
15. EDUCATION IN ENGLAND	344

PART III

16. AMERICAN BEGINNINGS	367
17. UNDER THE NEW CONSTITUTION	398
18. THE AMERICAN SYSTEM	434
19. TRANSFORMING THE ELEMENTARY SCHOOL	461
20. CREATING THE HIGH SCHOOL	496
21. EDUCATION TODAY	533
INDEX	563

A HISTORY OF
WESTERN EDUCATION

1 PERSPECTIVE AND PROSPECT

THE HISTORY OF EDUCATION IS THE HISTORY OF MAN BECOMING civilized and enlightened and of the institutions he has created and propagated to preserve and to advance those features of civilized life which he has learned to prize. To those who have the wit to understand and the imagination to realize the contrast between the naked, ignorant, and terrified savage and the humane, cultivated citizen of the twentieth century, and who can bring home to themselves also the realities of the hard but successful ascent toward civilization, this must be the story of an exciting adventure.

Education is sometimes thought to be a dull affair, but that is a radical error. It is ignorance and the lack of education, when for long stretches of time nothing happens within the mind of child or race, that occasion the tedium and boredom of our human existence. Education as a process of active inquiry and the pursuit of knowledge and of ideas, especially when the inquiry is rewarded by even slight discoveries, is never dull.

We should also notice at the outset that the word education or learning is used in two senses. Both are implied in the preceding words and both are essential meanings in life and school. The first sense is involved in the request: "Tell me, or show me, for I wish to learn." Here learning depends upon preservation and transmission. And the second meaning is implied in the contrary demand: "Do not tell me, because I want to learn for myself." Here learning results from discovery. Both are essential processes in education, but it is the second, self-education, that is the more inspiring. The education of mankind has proceeded through the discovery and the transmission of the elements of civilization.

1. EARLY LIFE AND EDUCATION OF MAN

Man has lived on the earth for a period so long, reaching back into the illimitable past so far, that it has to be computed not in decades or even

centuries but in thousands of years. Of man's early progress we know only what we may surmise from the condition of present-day savages and what a few skeletons, cave drawings, and artifacts such as stone fist hatchets, scrapers, and knives may reveal. Of course there are no records and no deliberate monuments from those early times of our race. Long ago, we do not know how early in his career, man also developed language and learned to speak. Both tools and language had to be invented, and these useful skills had to be transmitted from the older generation to the young. Along with speech and perhaps even before tools man also developed ideas. He began to present in his imagination what was not present to his sight and touch, and perhaps to forecast what was to come—after the hunt, a feast. Ideas were also transmitted to companions and to the young, ideas of physical comfort, of the seasons, and of nature in calm or fearsome mood, of human association, and of life and death. Civilization and education are based upon three characteristics which distinguish man from the other animals, the powers of articulate speech, of connected thought, and of inventing and making tools, weapons, clothing, and shelters.

Man is the builder of civilization; and he builds it by pyramiding, generation after generation, the experiences and discoveries of the present upon those of the past. Stone tools were displaced by copper, those by bronze, and these again by iron in a progression of cultures which occupied thousands of years. All these years man was learning. At all times and in every generation the old culture and the new had to be learned by the children. Civilization is never inherited. To speak of social inheritance is to employ a violent figure of speech. Every item of civilization, if it is not to be lost, must be learned by some individual; and this succession of discovery and transmissions was the earliest education. The young of the distant past learned as we still do by experiment, by actively taking part in life, by imitation, and, speaking loosely, by an apprenticeship to life, without schools.

It would be a great mistake to suppose that the early process of civilization building was always an upward and forward-going process that was carried on without error. Errors were then, as they still are, far more numerous than ten-strikes. Man, for example, acquired a vast array of magical beliefs and superstitions which he long prized and many of which still survive. Magic is an attempt to control the forces of nature or the gods, to gain food, assure victory, or satisfy other needs or desires, by irrational means. Primitive man did not distinguish magic from science; and both science and religion were filled with such supposed short-cuts to power. An American historian, Lynn Thorndike, has traced the history of science as the gradual process of replacing magical with rational processes in dealing with nature. One of the early arts of man in the Stone Age, the drawing

and painting of animals and hunters on the walls of caves, is supposed to have had a magical purpose. In the form of magic there employed, called sympathetic magic, a desired result is supposed to be brought about by

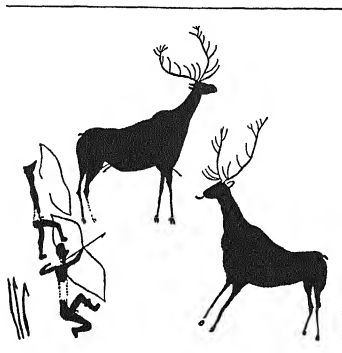


FIGURE 1.

FROM V. GORDON
CHILDE, "MAN MAKES
HIMSELF" LONDON,
WATTS AND CO., 1936

mimicking that result. A drawing of a deer, especially if it is pierced by an arrow, will bring game within reach of the hunter's weapon. The illustration shows such a supposedly magical drawing.

These ancient cave drawings and paintings, of which many have been found, are among the most remarkable of man's early achievements. The subject is altogether too large for treatment here and it is also too remote from our purpose; but if, as archaeologists believe, such works of art had a magical purpose they serve to illustrate the thought of this paragraph, that man in his ascent toward civilization followed many blind trails from which he had again to rescue himself.

Social inventions such as the family, the clan, and the tribe, with their forms of government and fixed customs, paralleled the accumulation of natural knowledge and the invention of new and better tools and weapons. Bands of hunters with the bow and arrow and half-tamed wolflike animals, the ancestors of the dog, roamed the forests. Fishermen with spears and nets and rude boats followed the streams and paddled on the inlets of the seas. When man began to domesticate animals for their flesh, skins,

and milk, the tribes of herdsmen had to find pasture for their flocks by following the rains from north to south and back again through the seasons of the year. When he began to cultivate the wild grasses from which wheat and barley were evolved he had to settle in one place, usually a river valley with fertile soil, for the cultivable land and the growing crop could not be moved. Even in the last Stone Age, villages of wooden houses with wooden furniture, pottery molded by hand without the wheel, and fields of barley and wheat existed on the shores of Swiss lakes. These lands were not owned by individual farmers but were the property of the whole community which controlled them by custom and law and worked them in common. With the rise of individual ownership and personal liberty one of the greatest of human problems arose. It is the problem of the proper relation of the individual to the group, the problem of individual rights and social duties.

The age of specialization was then beginning. The earliest specialization was the division of labor between men and women. Men provided the materials for food and clothing and the women prepared them for use. Men, perhaps, raised the flax and invented and built the loom and women spun the thread and wove the cloth. A second form of specialization was the setting apart of chieftains and medicine men for special duties. But the phrase, the age of specialization, implies much more. It means that some men developed special manual skills while the rest continued to follow the common relatively unskilled occupations. Men began to practice trades, woodworking and building, pottery, mining. The introduction of metals and of the potter's wheel were great technological advances and had the most far-reaching influences upon the development of a higher civilization. We shall not be able to follow the course of man's civilization building in detail but it is important to understand that long periods of time were involved. The age of man on earth reaches back perhaps three hundred thousand years; that of high civilization only five or ten thousand.

2. HIGH CIVILIZATION OF THE TWIN RIVERS

It was in the valley of the Nile and in the valleys of the Tigris and Euphrates that a technological civilization based upon science, government, and religion developed more than six thousand years ago. For a fuller account of these topics the student should turn to the excellent work on *Ancient Times* by James Henry Breasted and to the works which he cites.

We have noticed the rise of the age of specialization. This was closely followed by another epoch-making advance, the invention of writing which marks the dawn of history, with names, inscribed monuments, and dated

events. The oldest dated event, according to Breasted, is the establishment in Egypt about 4200 B.C. of a civil calendar with three hundred and sixty-five days to a year; but this date is not accepted by all students. Obviously events could not be accurately dated before a calendar was established and records were kept. The year having been determined, each passing year could then be marked by a great event such as a flood or a war or they could be numbered in a series of years. Nature herself has, of course, kept a sort of record in the fossils and artifacts deposited in the successive strata of the sedimentary rocks, but these ages can only be estimated and with a large allowance for possible error. Through human records, events can be dated precisely; and records also furnish the thoughts and opinions of the recorder. But here allowance must be made for the frailty and the perversity of the human agent. The period before records is known as prehistory. History is based upon records and began in the Near East where high civilization began. The origins of writing and records are traced in many books including the one which has just been mentioned. A word should also be said about the mistaken notion that Chinese civilization is older than that of the Near East. Metals were not used and no records were kept in China before about 1200 B.C., and this is several thousand years later than the rise of government, writing, and great buildings and monuments in Egypt and Mesopotamia.

Both specialization in work and the art of writing had evident implications for education. The former led directly to education through apprenticeship and the latter to the invention and establishment of the school. In the early days of our race, work was work and education as a separate activity hardly existed; and yet education had to be carried on, consciously or unconsciously, if discoveries and inventions were to be retained. Long before schools were established, children were taught in the family, the daughters by the mother and the sons by the father. The customary tools, weapons, and materials were at first fashioned by those who intended to use them. When occupations became specialized, careful and long-continued training became necessary and apprenticeship arose. The Code of Hammurabi, which will be presently noticed again, indicates that apprenticeship even then, four thousand years ago, was in an advanced stage both as a customary practice and as a legal institution. It was common in ancient times not only in Babylonia but also in China, India, and Egypt. Apprenticeship must be the earliest form of organized education and the parent of many later forms. Its great virtues are that it is real, real work and not make-believe work, work and not play; that success and failure are concrete and demonstrable; that the apprentice's work, if well done, is socially valuable and will be rewarded; and that the process is one which fosters, rather than retards, maturity.

Before we can consider the origin of the school in western Asia we must trace the history of Babylonia, as the region of the Tigris and Euphrates rivers is called. Babylon was not the first center of culture in this section. The oldest high civilization between the Twin Rivers, as on the Nile, was developed in the lower valleys with their rich and easily watered soils. A people called Sumerians lived on these fertile bottomlands perhaps before 4000 B.C. They learned the art of irrigation and became wealthy in the pursuits of agriculture and animal husbandry. The city-kingdoms of Sumer carried on an extensive commerce, developed a system of numerals with sixty as the base, standard weights and measures, and a servicable calendar. Before 3000 B.C. they employed a form of picture writing from which the cuneiform or wedge-shaped writing of later Babylonia was developed. Great quantities of business records such as bills, receipts, and notes have been found on the sites of Sumerian towns. The center of a Sumerian town was the temple with its priests, assisted by scribes. The chief priest was the ruler of the town and was in charge of defense, irrigation, and taxation, as well as religion.

When Sumer had become luxurious, foreign invaders came down the Tigris from Akkad, a Semitic country toward the north. The army of vigorous tribesmen was led by a great chief, Sargon, who conquered Sumer about 2500 B.C. and then, with it as a base, established a great kingdom that reached to the Mediterranean. In time the nomad herdsmen and warriors settled down in Sumer and adopted the Sumerian civilization. They learned to write the Sumerian script and to use the weights and measures, the arts and culture of the country which they had overrun. This is an early example of a process that has been repeated many times in history. As conquered Sumer "took captive its rude conqueror" and civilized him so the Aegeans civilized the invading Hellenes, so the Greeks in turn softened the asperities and refined the taste of the Romans, and so the Romans and the Roman Church taught the Germans, Goths, and Vandals the arts of peace and civilized life.

After the tribesmen of Akkad and the city dwellers of Sumer had lived together for several centuries and after the Sargon dynasty declined, some of the cities again regained control. One of the best known of these was the city of Ur, whence according to the Bible came the Hebrew patriarch Abraham. Silver and gold came to be used as the mediums of exchange. A pound of silver was called a mina, and one sixtieth of a pound was a shekel. "Sixty shekels make a mina," the schoolboys were taught to say, for now there were schools, books, and exercise tablets by which numbers, money, weights, business forms, writing, and literature were taught. Before 2000 B.C. there were grammars and dictionaries in the schools of Ur. By that time the old Sumerian speech had gone out of common use and had

come to be regarded as more sacred than the Semitic tongue which had displaced it. But the Sumenan language continued in religious use after it was no longer commonly spoken, another early example of a frequent historical process. The tongue of ancient Sumer became a sacred language as Greek, Latin, Hebrew, and Arabic are today in different parts of the world.

The city which was to give its name to this whole region, Babylon, had remained an insignificant town on the Euphrates until about 2000 B.C., when it became the cultural and political capital of the country of the Twin Rivers. A century later (1948-1904 B.C.) Hammurabi, an enlightened ruler and the greatest king since Saigon, came to the throne and gave laws to the region, the famous Code of Hammurabi which has already been mentioned. This Code consisted of old Sumerian laws collected and new laws added, all systematically arranged, and carved on a splendid stone shaft which was set up in the temple of the great god Marduk. This is the oldest surviving code of laws. It regulated the administration of justice, business, apprenticeship, marriage, and other social relations.

The old Sumerian gods were still worshiped in Babylon, but the name of the Semitic god, Marduk, was now inserted in the religious stories where that of Enlil, the great god of Sumer, had been previously read; and that of Ishtar, the goddess of love who became the Venus of Rome, was added. To train priests and clerks for the temple and for business, schools were established in connection with the temple. There even were women scribes. The ruins of a schoolhouse with the exercise tablets of the children of four thousand years ago has been found in Babylon. One of these tablets has a proverb that was set as a writing and memory copy. Like the old Spencian copybook maxims of modern America, it was intended to encourage the pupils in well-doing. It read: "He who shall excel in tablet-writing shall shine as the sun." On the following page we give from Breasted a plan of this ancient schoolhouse.

After the Babylonians, another semibarbarous and conquering race, the Assyrians, subdued the country of the Twin Rivers. The ages of copper (c. 4000-2000 B.C.) and of bronze (2000-1000 B.C.) had passed, and the Assyrians came armed with iron weapons. They built the great city of Nineveh and under a succession of warrior-emperors ruled the entire region. They built great palaces and temples with tall square towers, and aqueducts and the roads upon which the royal messengers traveled to every part of the empire. They were the Romans of ancient western Asia. As they became civilized they pursued aesthetic and intellectual interests. They developed or inherited a musical notation with a scale of five tones and played on a harp of twenty-two strings, an instrument that was widely used later. Their animal sculpture was vigorous and lifelike. They erected

great libraries into which they gathered the religious, scientific, and literary works of their own and past times. These collections reached their height

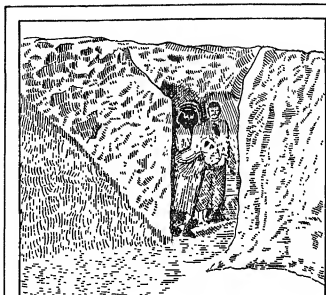
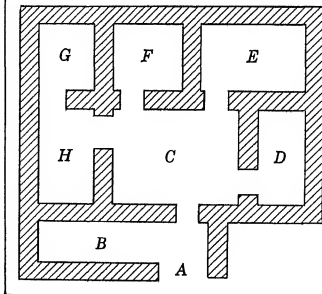


FIGURE 2

A SCHOOLHOUSE OF THE
TIME OF HAMMURABI

The drawing at the top shows the entrance, and the walls of sun-dried brick, of a schoolhouse that was built more than four thousand years ago. The lower figure shows the plan of the building. The court marked "C" was probably open to the sky. The building was uncovered in 1894 by French archaeologists. A supply of clay for writing tablets was found in it.

Drawing after Schiel. Redrawn from James H. Breasted's *Ancient Times* (1935), by permission of the publishers, Ginn and Company.



under Ashurbanipal (r. 668–626 B.C.) who was known to the Greeks as Sardanapalus. Ashurbanipal has left us a boastful eulogy of his own accomplishments in learning, the only such account of an Assyrian youth

and one of the earliest of autobiographies. Although it is only a fragment, it shows what skills and knowledge were valued by the cultured men of his time; and it indicates the degree in which they and other ancient peoples attributed their learning to the gods.

As presented by A. H. Sayce and A. N. J. Whyman (Encyclopedia Britannica, 14th edition, 2,851) the eulogy reads as follows: "I, Ashurbanipal, understood the wisdom of Nabu; all the art of tablet writing of every kind of clerk, I acquired their understanding. I learned to shoot the bow, to ride horses, and chariots, and to hold the reins." Nabu, who is again mentioned below, was one of their gods and since he is also called "the scribe," the art of writing may have been attributed to him as the Egyptians ascribed the same art to their god Thoth or Theuth of whom we read in Plato's *Phaedrus*. Ashurbanipal also wrote: "Marduk, the wise one of the gods, presented me with information and understanding as a gift. Nabu, the scribe, granted me all the understanding of his wisdom as a present. Ennita and Nergal made me virile and strong, of incomparable force. I understood the craft of the wise Adapa, the hidden secrets of all the scribal art; in heavenly and earthly buildings I read and pondered, in the meetings of clerks I was present, I watched the omens, I explained the heavens with the learned priests, recited the complicated multiplications and divisions which are not immediately apparent. The beautiful writings in Sumerian that are obscure, in Akkadian that are difficult to bear in mind, it was my joy to repeat." He goes on to describe his skill in horsemanship and the arts of war and concludes with a flourish, thus: "At the same time I learnt what is proper for lordship, I went my royal ways." How all these matters were learned and taught, who were the teachers, and how widespread such learning and pride in learning were, we do not know. Ashurbanipal was king of Assyria from 668 to 626 B.C., two centuries before the flowering time of Athens in Greece. To the Greeks in their rough western mountains he seemed a luxurious and rather effeminate prince.

3. HEBREW RELIGION AND EDUCATION

This brief sketch of the country of the Twin Rivers must suffice on the early high civilizations which arose between the Nile and the Tigris. Elam which lay beyond the Tigris, east and south, where the great oil fields now are, had a civilization as early as Sumer. For the story of the Hittites, the Phoenicians, and the great Persian Empire the student must go to a general history of the ancient world. Even Egypt, which antedated and paralleled the achievements of Babylonia and surpassed her in technology, in the great pyramids, temples, and tombs with their superlative art, will

be omitted for lack of space and because it would add no essentially new educational features to this rapid survey. History tells much of the life of these countries and peoples over great stretches of time beginning five or six thousand years ago. Of their schools we know very little. The Hebrews, a small people who have had a great and continuing influence upon the West, we cannot altogether omit.

When the Hebrews first appear in history they were nomadic herdsmen from the Arabian desert who were moving into Palestine about 1200 B.C. Some of them had been enslaved in Egypt, and these were led out by Moses who became one of their great heroes. Palestine, where they eventually settled, was inhabited by the Philistines, from whom the name Palestine was derived, and by the Canaanites. These peoples were further advanced in the arts of civilization than the Hebrews. They lived in cities and carried on agriculture and trade which the Hebrews learned from them. About the year 1000 B.C. the Hebrews formed a national government under a succession of warrior kings, Saul, David, and Solomon, and established their capital at Jerusalem. They gradually developed a monotheistic religion, a system of ethics, and an important body of literature, much of which is included in the Bible; and through these they radically influenced the West. The religion of the early Hebrews was practically synonymous with patriotism, but eventually they accepted the idea that their god, Yahweh, was the God of all the earth. They taught that they, the Hebrews, were God's Chosen People, that man was made in His likeness, and that personal holiness before God was the end of man's existence. Character, not knowledge, or skill, or wealth, was the purpose of life. They had a high regard for womanhood and taught their children to honor father and mother and stressed a pure family life. The father was the ruler, priest, and teacher of the family, and the teaching of the children remained in his hands for many centuries. The Temple in Jerusalem with its sacred objects was the center of their religious life and had a great nationalizing influence among them.

The tribes that invaded Canaan, later called Palestine, were entirely illiterate and remained so until the eighth century. They acquired writing from the Philistines who had obtained their alphabet from Egypt. As the Hebrews developed town life and commerce, they became wealthy and luxurious and began to take on the manners, the religious ideas, and the forms of worship of their neighbors. Those who remained faithful to the Hebrew God called this idolatry. Under these conditions a new class of religious teachers, called prophets, arose. It was the prophets who began to teach that their God, Yahweh, was different from other gods in His moral character and that He dealt righteously, ethically, with His People. They taught that the reverses of the Chosen People were His punishments

and were visited upon them for their idolatry and sin. The early prophets delivered their messages orally, but about 750 B.C. the first literate prophets, Amos, Hosea, and those who followed, wrote down their teachings for posterity. Amos was a "herdsman of Tekoa"; and that he and others who came from the common people were able to write shows that book learning had by the eighth and seventh centuries spread to some among the masses of the people.

Although common people, like Amos, learned to read and write, we hear nothing of schools in this early period. The religious teachings which were called "the Law" and the art of writing were inculcated in the family. The prophets held that the object of education was to teach children to know the Law and to follow it; and the responsibility for this teaching was laid upon the father. In Deuteronomy, the sixth chapter, we read: "Thou shalt teach the Laws diligently unto thy children, and shalt talk of them when thou sittest in thine house and when thou walkest by the way."

Palestine is not a rich country. The southern part, especially, is chiefly dry desert and grazing country, but in the north there are fertile valleys. Although not desired for its fertility by its powerful neighbors on the north, east, and southwest, it had great importance for these strong states because it lay on the direct route between them. Every peaceful or hostile mission, every caravan and army between the Nile and the Twin Rivers had to pass through Palestine to avoid the Arabian desert. In the northern part of Palestine lay the battlefield of Armageddon, modern Megiddo, where the fate of more than one great army was sealed. Thus the Hebrews were frequently the victims of their neighbors' quarrels. Nor could they agree among themselves. The nation which had been united under Saul and David broke up into two, Judah in the south and Israel in the north. Early in the sixth century a catastrophe overtook the southern kingdom. The people of Judah were carried into captivity by Nebuchadnezzar of Babylon, and held for more than fifty years before they were again released. Their return was marked by the growth of a world religion, the rebuilding of the Temple, strict observance of the Law, and strong national feeling. The prophecy of Isaiah beginning with chapter forty gives noble expression to this new sense that the God of the Hebrews is the God of the whole earth.

Meanwhile a language change had occurred. The Hebrews no longer spoke their ancient tongue but had come to speak a derivative speech, the Aramaic language. The Hebrew was still used for the Law and the religious worship and thus came to be a sacred language; and a learned, literary class became necessary to keep and transcribe the text of the Law and to interpret it to the people. These were the Scribes. And a teaching

institution, the synagogue, was set up in the towns and villages in order that the Law might be read and explained to the people. The new era needed education more than ever, and later Judaism was intensely concerned with the teaching of the young as well as adults. Josephus (c. A.D. 37-95) wrote in *Contra Apion*: "We take most pains of all with the instruction of the children and esteem the observance of the laws and the piety corresponding with them the most important matter of our whole life." By about 100 B.C. schools for children were attached to the synagogues, and in A.D. 64 the High Priest, Joshua ben Gamala, ordered the opening of an elementary school in every village where attendance was to be compulsory for boys from the age of six. This is the earliest attempt at compulsory school attendance. The instruction was apparently dogmatic and memoriter but there were also "disputations" in which there was opportunity for difference of opinion and argument. The girls were taught at home.

We have now sketched, very briefly indeed, but with all the fullness that our space will allow, the rise of civilization and the origin of schools. Schools in the pre-Greek world seem everywhere to have been connected with the temples and the worship of the gods. As the art of writing developed, as religious doctrines and forms of worship came to be written down, schools became necessary to teach priests and people to read the sacred literature. They became still more essential as the language changed and the older language of the cult, which had become standardized and invariable, ceased to be intelligible without special study. This, as we have just noted, occurred among the Hebrews, but it had also taken place in Babylonia. Ashurbanipal, we recall, was proud that he had learned to read "the beautiful writings in Sumerian that are obscure" and "in Akkadian that are difficult to bear in mind."

But writing and reading had not merely a religious but also a business and political use. Commercial and administrative records had to be kept, and for this it was necessary that "the hidden secrets of the scribal art" should be known to the large body of clerks that served in the temples, counting-houses, and chanceries of the great cities. A similar atmosphere of secrecy enveloped the skills of the trades. Those who had learned an art or craft, whether the tanning of leather, or the smelting of metals, or the ceramic crafts, were interested to conceal the "mystery" which they had acquired from those who had not undergone a similar apprenticeship. Their purpose was to preserve to the initiated the rewards of their privileged position.

The notion that learning should be spread as far as possible and should be freely open to all is a recent idea. Such thoughts were foreign to the pre-Greek world and did not become widespread until modern times. In

the next chapter when we come to study the schools of ancient Athens we shall see that the Greeks introduced the idea that literary education, at least, was not to be a cult or trade secret but that it should be spread abroad and that its purpose should be the development of personality and preparation for citizenship. But even there these generous aims were applied only to the sons of citizens. Even the most liberal of the Athenians did not propose to educate slaves or girls whether slave or free. And with all her achievements in the arts and sciences, Greece enabled only a few of her talented sons to go beyond the elements of learning. It was, in the Greek social and political scheme, inevitable that this should be so.

This chapter summarizes the history of civilization to the point at which schools and other formal means of education were employed to maintain and raise the level of culture. We deal only with the high civilization which influenced the Greeks and Hebrews who, in their turn, became our intellectual and spiritual ancestors. The opening sentence of the chapter announces the theme of the book. The theme is that education is the process by which man, through the discovery and preservation of all that he considers valuable, becomes civilized and enlightened. This has been a slow, though cumulative process. Man has often suffered from the defects of his own perverse nature, and apparently valuable discoveries have many times turned out to be fool's gold.

In the fertile valleys of the Nile and the Tigris and Euphrates rivers, agriculture and commerce flourished; populous cities and powerful empires arose. Economic and political power was in the hands of the priests; and the temples were administrative as well as religious institutions. In early times teaching and learning were carried on by participation in the common activities of life, and by family and priestly teaching. Apprenticeship arose with the rise of specialized occupations. Four thousand years ago, it was already an old and widespread institution. Schools arose to promote religion and to teach writing and calculation. Learning was restricted to selected groups. Both literary and manual skills were confined to the initiated.

The Hebrews who lived in Palestine, on the high road between Egypt and Babylonia, developed an ethical monotheistic religion and literature which have had an important influence in Western education.

The Greeks, who will be treated in the next chapter, borrowed from the neighboring empires and the Aegean region. Being a creative people, they refined the arts, increased knowledge, and, through a free, inquiring spirit, released education from some of the mystery in which it had been confined.

QUESTIONS

1. What other essential characteristics of man, besides speech, thought and the invention and construction of tools, can be named? Would the possession of conscience be one? What is the bearing upon education of each of the characteristics you name?

2. What is "social inheritance"? Give examples. How are teaching and learning related to the "social inheritance" of a particular people?
3. The text mentions some of the advantages of apprenticeship as a method of learning. What are its disadvantages?
4. What, from the standpoint of your own ideals, were the defects of the education of Ashurbanipal?
5. Compare the educational ideals of the Hebrews and other ancient peoples, using the information of this chapter.
6. Why was education in early times confined to a small class and, only long after, more widely extended?

FOR FURTHER READING AND STUDY

The bibliography in Breasted's *Ancient Times* will make it unnecessary to name many titles. The ones listed below are general and elementary and do not, therefore, presuppose any technical knowledge of anthropology or archaeology. Special mention should be made of an article on "Jewish Education" in the *Cyclopedia of Education*, edited by Paul Monroe (New York, Macmillan Co., 1911-1913, 5 vols.), Vol. III, pp. 542-553. In addition to the books dealing with the topics of the present chapter we give below also the titles of several of the standard history of education texts. These can be consulted on the topics of this and the following chapters.

Boyle, Mary E., *Man Before History*, Boston, Little, Brown and Co., 1926, 135 pp. A useful primer on prehistory.

Breasted, James Henry, *Ancient Times A History of the Early World*, Boston, Ginn and Co., 1935, 823 pp. It is important to use this second and revised edition. The "Library Edition" of the same book was issued under the title *The Conquest of Civilization* and is a new work edited by Edith Williams Ware in 1938 (New York, The Literary Guild of America, Inc., 669 pp.).

Childe, V. Gordon, *Man Makes Himself*, London, Watts and Co., 1939, 275 pp.

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- Duggan, Stephen, *A Student's Textbook in the History of Education*, New York, D. Appleton-Century Co., 1936, 486 pp
- Eby, Frederick, and C. F. Arrowood, *The Development of Modern Education*, New York, Prentice-Hall, 1934, 922 pp., *The History and Philosophy of Education, Ancient and Medieval*, New York, Prentice-Hall, 1940, 966 pp
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- Reisner, Edward H., *Historical Foundations of Modern Education*, New York, The Macmillan Company, 1927, 513 pp
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2 EDUCATION IN ANCIENT GREECE

MORE THAN TWO THOUSAND YEARS AGO THE GREEKS DEVELOPED the basic forms of the arts and sciences, of literature, and of philosophy. They were the first to study systematically the closely related subjects of ethics, politics, and education; and their schools, although they were not public institutions, aimed at public and civic purposes. The Greeks were the first to use the school as a means of preparing citizens for citizenship.

None of the older civilizations has so directly and fruitfully influenced the West. Therefore, we share with the Greeks a close intellectual and political kinship, while the Babylonian and Egyptian civilizations developed on lines that seem to us foreign. In race and language also, the Greeks were our near relatives. The dominant Greek stock was Indo-European. They were the cousins of the Aryans of India, of the ancient Persians, and of most of the races of Europe. The term Indo-European is, however, properly applied to languages, not races; and calling the Greeks Indo-Europeans really means that their language belongs to the same family as the Latin, the English, and the other major European languages.

The ancient Greek people called their land *Hellas* and themselves *Hellenes* after a mythical ancestor, *Hellen*, from whom they claimed to be descended. Our modern accounts are different. They were the issue of a mingling of several groups of people. About 1500 B.C. some tribes of warriors with long iron swords came from the north into the Greek peninsula and the islands of the Aegean Sea, and conquered the highly civilized people who were living in those territories. Conquered and conquerors amalgamated to form the people whom we know as the Greeks of ancient history. Their descendants gradually became farmers, skilled artisans, traders, and colonizers; and eventually they spread over much of the Mediterranean world. None of the Greek cities was far from the sea. Wherever they settled, on the mainland, on the islands of the Aegean, in Asia Minor, in Italy and Sicily, on the coasts of modern France and Spain, or far east-

ward on the shores of the Black Sea, the Greeks were a commercial and seafaring people. Association with foreign races helped to make them observant, inquiring, and thoughtful.

The unit of political life was the city and the surrounding territory which was often enclosed by ranges of mountains or the arms of the sea. On the mainland and the islands there were many of these small, independent, and sovereign city-states such as Sparta, Athens, Achaea, Thebes, and Argos. On the average, each had a total population of between one hundred thousand and three hundred thousand. The forms of government included monarchy, oligarchy, democracy, and tyranny. The earliest examples of democracy developed among the Greek people; and their experience and their political theory were carefully studied by Hamilton, Madison, Jefferson, and other founders of our republic. They did not succeed in forming a unified nation-state, they did not invent representative democracy, and the unions they formed were only temporary leagues, yet their experiments in government were valuable to later ages.

The evil of slavery formed one of the darkest blots upon ancient civilization; and it was found everywhere in the ancient world, including Greece. In Sparta and Athens, the only Greek states with which we shall deal, the slaves were far more numerous than the citizens. Some of them were owned by the state; and their lot, under this public exploitation, was much worse than that of the privately owned and, especially, the domestic slaves. None of them had any political rights; and they usually received no education, although, because they could be used as writers and as merchants, there were exceptions to this rule. But they were after all slaves, and slavery corrupts both the master and the slave.

Sparta and Athens developed the two best known types of ancient Greek education, but the difference between them is often made to appear more radical than it was. Their practices and philosophies were, indeed, somewhat different, but their basic purposes were similar. Both took for their chief aims the training and education of strong and courageous soldiers and loyal citizens thoroughly imbued with the conventional morality. Neither intended to give much freedom to the individual, although Athens gave far more attention to intellectual and aesthetic elements and allowed more individual liberty than Sparta.

1. SPARTA

There were three classes of people in Sparta: the Spartiates, or Spartans proper, who were descendants of the Dorian conquerors and were the citizens; the Perioeci who tilled the land in a sort of feudal economy, and who were free but had no political rights; and the Helots who were public

slaves owned by the state. The two servile classes outnumbered the Spartiates many times and were the descendants of the ancient inhabitants of the land. Their agricultural products and other goods were heavily taxed for the support of the army and the families of their conquerors and oppressors. Thus the Spartiates were freed from all manual and menial labor to devote themselves to military and civil activities. The country was divided into about nine thousand plots of land, each of which was made to furnish the support of one able-bodied soldier and his family and dependents. These citizen-soldiers lived in barracks in companies and took their meals together. The scheme was entirely static and unprogressive. The economic system was a form of state communism.

The characteristic fact about Spartan education is that it was carried out on military lines, because it was organized and controlled by a state that was founded upon conquest and which always remained an armed camp. The utmost emphasis was, therefore, placed upon physical and military training, and upon moral and civil training. The aim was to develop courage, military skill, obedience to law and to custom, and reverence for the elders. The ideal was a man who was determined, courageous, of moderate desires, who did not give way to his feelings, and who was no babbler. They shared the Greek religion and the Greek language and its great literary monuments, the Homeric poems, with all the Hellenes; but they placed little emphasis upon intellectual education.

Only healthy children could be used by such a state, and all others were by legal command exposed to die or were adopted by the Helots or Perioeci. Every vigorous little boy who was approved by the elders was brought up at home by his mother until the age of seven, when he was transferred to barracks for public training in a company of about sixty cadets of his own age. These were organized in military fashion. At the head of each company there was an *Eiren*, a young man of twenty, or more who had completed his training and had taken his oath of citizenship and loyalty to the state. A general superintendent, the *paidonomos*, ruled very strictly over the whole system.

The physical education was intended not only to develop endurance and to harden the muscles, but also to toughen the mental and moral fiber and stamina. The cadets slept without cover on beds of straw or of rushes which, as they grew older, they had to pull for themselves from the banks of the small Spartan river, the Eurotas. They were purposely limited in garments also and they went shoeless in winter as in summer. Their food was curtailed to encourage foraging which would tend to develop craftiness, since severe punishment followed upon detection. And the lash was applied, not only for punishment, but also to develop hardihood and endurance; before the altar of Artemis Orthia, in the final test for citizen-

ship, boys were scourged so severely that death sometimes resulted. Gymnastic exercises and sports were among the chief means of education; and these included the pentathlon: running, jumping, throwing the discus and the javelin, and wrestling. Ball games were also played. The pancratium was a combination of wrestling, boxing, and fighting and was not governed by any rule or restraint. Older boys were trained in the use of arms.

Mental and moral training was involved in the dances and in the musical education which was provided. Boys and young men were taught to play the lyre and to sing, both solo and in chorus. Doric chant and dance helped to develop and to express patriotic and religious feeling; and to a great degree these two came to the same thing, for Greek religion was largely a racial and civic religion. Their gods were the gods of the Greek people and the religious rites were enjoined by the state. Doric music was intended to make men brave, reverent, and proud of their fatherland. The marching songs of Tyrtaeus were highly prized.

Reading and writing were not included in the public education. These were sometimes taught privately; and then Homer, and Pindar who was the poet of athletes and the athletic games, were read and memorized. But science and intellectual learning received small attention. Poetry, except as it taught patriotism and morality, and oratory were not as highly regarded as practical sense and laconic speech. Short and witty apothegms, such as the Spartan mother's farewell word to her son leaving for a campaign, were highly praised. She said: "Return with your shield or on it." The trainers often asked the boys to sing a song or to give a short and pithy answer to such a question as "who is the best man in Sparta?" At the public tables the youth listened to the discussion of public questions by older men; and this was regarded as a means of political education. An iron discipline gripped the boy and held him from his seventh to his thirtieth year when full citizenship was granted. All adult men had the right and the duty to take part in the education of youth and were empowered to punish faults and bad conduct. At thirty, when full adulthood was finally attained, came the liberty and obligation to establish a home and raise a family. From thirty until forty-five they were enlisted in the national army and until sixty in the home guards.

Girls were given a similar public athletic training. Women's highest duty was the bearing of healthy children for the state, that is, for the army. This sounds very much like some modern German or Italian propaganda. Like the boys they were organized by ages into troops and exercised in jumping, running, wrestling, and throwing the discus. Dancing and choral singing, marching, and participation in religious rites were carried out. But they lived at home, not in a public institution. Young Spartan maidens were not so expert in spinning and weaving as their

Athenian cousins, but they were excellent housekeepers and managers and also took their share in the discussion of public questions. The Spartan matron, like the Roman, had more influence in family and state than the more oriental Athenian *hausfrau*. This Spartan regard for the opinion of women was so unusual that it seemed odd to most of the Greeks.

Spartan life and education was thus directed almost exclusively toward military success at home and abroad, and the individual's personal desires were given little consideration. Herodotus (VII, 104) makes the exile say to Xerxes: "The Spartans are the best of all men when fighting in a body; for, though free, yet they are not free in all things, since over them there is set law as a master, which they fear much more than your subjects do you." Sparta was long a firmly established but never a progressive or developing state and it produced no great poets, painters, sculptors, or philosophers but only soldiers and politicians. Even the exact site of the ancient town is in doubt because she had no monuments and no great buildings. Her men were courageous and her women virtuous, but they lacked most of the finer intellectual interests and moral traits which civilization should develop. According to Aristotle, government should aim to develop character in the citizens, making them good and capable of fine actions. In the *Politics* (VII, 14) he declares that legislators are less likely to frame governments, make laws, and set up educational plans with a view to cultivating the virtues than to tend, "in a vulgar spirit," to stress those matters which promise to be useful and profitable. Many modern writers, he continues, have taken a similar view: they commend the Lacedaemonian constitution, and praise the legislator for making conquest and war his sole aim, a doctrine which "may be refuted by argument and has long since been refuted by facts." Sparta in continuing its military system according to old custom, having lost her independence, was, he said, also losing the chance to become civilized.

Spartan education is historically important not only for its example but also because it influenced the thought of the great Greek philosopher, Plato, and through him the thought of the world. Plato's *Republic* and *Laws* borrow a great deal from the Spartan experience. The hardening system of training which is intended to toughen body and spirit and to build up resistances and immunities had an early historical expression in Spartan practice whence it passed over into the works of Montaigne, Locke, and Rousseau, and many modern masters. And there is a related and still more important point. The modern cult of physical education is not altogether Spartan, but in its militaristic form in some states like Nazi Germany, with its youth movement, and Fascist Italy, with its *Balilla*, it came close to the Spartan philosophy that the end of life is power. Thus this very early topic of our survey is not only ancient history but modern politics as well.

2. ATHENS

The peninsula of Greece, projecting into the eastern Mediterranean like an open hand, has for its thumb the little country of Attica pointing eastward toward Asia Minor and the colonies where the Seven Wise Men lived and the higher Greek culture first developed. The city-state of Attica, for which the name Athens, its capitol, is almost universally substituted, was somewhat smaller than Rhode Island and in its prosperous days had a population of about two hundred thousand. The state enjoyed an income from the rich silver mines of Laurium, which were worked by slave labor. The soil was not particularly fertile, but the olive and the vine flourished and various manufactures, especially that of pottery, were carried on. Many Athenians engaged in the extensive commercial undertakings and the large carrying-trade for which their state was admirably situated. These overseas connections led to the importation from the East and Egypt not only of commercial goods but also of ideas. Of both classes of imports the gifted Athenian people made full use, and by the end of the Persian Wars, about 480 B.C., Athens had become a wealthy and highly cultured city, and the leader of the Greek city-states.

Although the Greeks were unable to achieve political unity, Greece, or Hellas, was not merely a geographical term. There was a strong cultural unity based upon language, religion, similar customs, and the consciousness of a common origin and history, together with the great games which drew their contestants, spectators, and audiences from all the regions in which the Greek people had settled. Athens was the great center of this cultural development, which reached its most creative period in the fifth and fourth centuries before Christ. The spirit of the Athens of that epoch is portrayed in a famous "speech" of Pericles (c. 495-429 B.C.), as reported or composed by the historian Thucydides.

Thucydides (c. 464-410 B.C.) makes Pericles, in the "Funeral Oration," praise the people and the polity of his city as follows:

Our form of government does not enter into rivalry with the institutions of others. We do not copy our neighbors, but are an example to them. It is true that we are called a democracy, for the administration is in the hands of the many and not of the few. But while the law secures equal justice to all alike in their private disputes, the claim of excellence is also recognized; and when a citizen is in any way distinguished, he is preferred to the public service, not as a matter of privilege, but as the reward of merit. Neither is poverty a bar, but a man may benefit his country whatever the obscurity of his condition.

And we have not forgotten to provide for our weary spirits many relaxations from toil; we have regular games and sacrifices throughout the year; at home the style of our life is refined; and the delight which we daily feel in all these things helps to banish melancholy. Because of the greatness of our city the fruits of the

whole earth flow in upon us, so that we may enjoy the goods of other countries as freely as our own.

Then, again, our military training is in many respects superior to that of our adversaries [the Spartans]. . . And in the matter of education, whereas they from early youth are always undergoing laborious exercises which are to make them brave, we live at ease, and yet are ready to face the perils which they face.

If, then, we prefer to meet danger with a light heart, but without laborious training are we not greatly the gainers? . . . An Athenian citizen does not neglect the state because he takes care of his own household, and even those of us who are engaged in business have a very fair idea of politics. . . .

To sum up, I say that Athens is the school of Hellas, and that the individual Athenian in his own person seems to have the power of adapting himself to the most varied forms of action with the utmost versatility and grace. This is no passing and idle word, but truth and fact; and the assertion is verified by the position to which these qualities have raised the state. For in the hour of trial Athens alone among her contemporaries is superior to the report of her. No enemy who comes against her is indignant at the reverses which he sustains at the hands of such a city; no subject complains that his masters are unworthy of him. And we shall assuredly not be without witnesses; there are mighty monuments of our power which will make us the wonder of this and of succeeding ages: we shall not need the praises of Homer or of any other panegyrist, whose poetry may please for the moment, although his representation of the facts will not bear the light of day. For we have compelled every land, every sea, to open a path for our valour, and have everywhere planted eternal memorials of our friendship and of our enmity.

This supposed speech is, however, the statement of a great ideal rather than a dispassionate account of the actual conditions. To prove this we need only recall that citizenship was the privilege of only one-fourth of the population; and that those who actually controlled the Athenian city-state were only a small part of its citizenry. But the ideal is a noble one and could have been formed only in a great and noble state.

3. THE ATHENIAN SCHOOLS

In wealthy families, nurses who were usually slaves cared for the children in their infant years; and for this purpose Spartans were often preferred because they were considered especially capable. That the Athenian parents loved and indulged their children is shown in literature and many inscriptions. There were cradle songs, children's stories, and many toys, and games. The manufacture of dolls was an Athenian industry. The games were such universal favorites as marbles, leapfrog, hoops, ball games, and knuckle-bones. Children's games are among the most conservative and persistent of customs.

Formal education began at the age of seven. Each family had a pedagogue, a paidagogos or man-servant, whose duty it was to escort the boys

to school while he waited until their lessons were done when he conducted them home again. The pedagogue was to permit no loitering and gadding about, for modesty was one of the ideals of conduct for boys. He had the direction of the morals of his charges and was allowed to use the whip, but he was not always highly esteemed or willingly obeyed by the boys. Only the boys were sent to school. The girls were given domestic education by the mother in the home.

There were three separate elementary schools for boys in Athens: the letters school for reading, writing, and the elements of arithmetic, the music school which taught lyric poetry and the mastery of the seven-stringed lyre, and the gymnastic school or palaestra. All of these were private schools and the parents paid the fees by the month. Both the qualifications and the social standing of the teachers were low. The boys commonly attended the letters school or the music school in the morning and the palaestra in the afternoon; but the schools were quite independent of each other and almost entirely unregulated by law. There was an Athenian law which restricted schools to daylight hours; and another which said that only fathers who sent their boys to school could expect aid in old age from their sons. The former law indicates the fact that the Athenian school day was a long one. The latter suggests, what is also a fact, that all the sons of Athenian citizens were given the chance to learn to read. Athenian schooling for boys extended from the age of seven until they went to work in early adolescence; but rich lads attended school longer. In the later period of Greek history, after about 340 B.C., the young men of the upper classes were enrolled in the ephebic corps and served as frontier patrols for two years between the ages of eighteen and twenty.

Before we consider the school exercises, we must notice that among the Greeks the word music had a wider application than it has with us. In Athenian education, literature, including reading and writing, together with music in our sense, were the concern of the Muses; and, indeed, all intellectual studies were considered forms of music. The aim of both the music and the gymnastics, or, in other words, of mental and physical education, was moral excellence.

The letters school taught first the alphabet, then syllables, then words, and reading, and writing. The master was called a *grammatist* from *grammata*, meaning letters, and from this our word grammar is derived. The teaching methods were mechanical and the motive was often supplied by the rod. The teacher pronounced the name of the letter or the word; the pupil pronounced after him. The school had little equipment. Potsherds from the large potteries west of the city were used for practice writing. Wax tablets consisting of thin wax-covered boards hinged together were also used for the same purpose. Books were costly and were in the form

of a roll, a form which is very inconvenient for reference and school use, although quite handy for continuous reading. Besides Homer the children were taught Aesop, Hesiod, and later the lyric poets. Partly because books were scarce, the children were required to memorize long passages from Homer and other poets. In later times when grammar, in the modern sense, became a subject of study and when literature became more common, the courses of study grew longer and secondary education, chiefly literary



FIGURE 3.

ATHENIAN SCHOOL SCENE FROM A
VASE PAINTING

in content, was developed. This is the reason for the term grammar school as applied to secondary or intermediate education. But it was the Romans, not the Greeks, who first fully organized the secondary school and made it a school of literature.

Writing was taught from a copy set by the master on a wax tablet with the stylus. This copy the boy traced, following the groove; and the master also guided the boy's hand at the beginning until he was able to imitate the copy. When sufficient skill had been attained the master dictated a text which the pupil wrote down and memorized. With the scarcity of books dictation was an unavoidable exercise and among the Romans *dictata* came to mean schoolbooks; and later a derived form, *dictamen*, meant the writing of legal papers and forms and the study of law. Arithmetic was little taught in schools, partly because of its connection with the menial occupations of commerce—from Plato's *Laws* one would gather that educated men were often wholly ignorant of arithmetic—but partly also because the Greeks had a poor and difficult method of writing numbers. Although they counted by tens, they used twenty-seven or more characters

in their arithmetical notation. With all its acuteness the ancient world did not succeed in inventing an appropriate symbolism for calculation. The schools therefore taught little arithmetic beyond counting and the addition and subtraction of whole numbers. In the business world finger reckoning with an elaborate system of signs and gestures prevailed. This could be carried on between persons who were wholly illiterate. Business, and perhaps the school also, used the abacus or counting-board in calculation.



FIGURE 4.

FROM THE REVERSE OF THE SAME
VASE

Instruction in music, in our sense of the word, usually began after some progress had been made in reading, and both were taught by the same teacher in early times; but later a separate school and teacher, the *citharist*, arose. Singing and the playing of the lyre were taught. These were practiced at the same time, for the boy was taught to play an accompaniment to his own voice rendering the words of the lyric poets. This ability was a social requirement, lack of which marked one as uneducated. The lyre was in a way the national instrument which, it was believed, Apollo himself had used. Another Greek instrument was the Asiatic pipe, commonly called the flute, although it was not the modern instrument. This was not favored in the school because it was used in Bacchic festivals and was supposed to be sensual in its effects.

Among the Greeks music was an essential element of education. It was not a mere recreation but was regarded as a means of forming the character and disposition and of ethical-religious education. It was never in old days considered apart from poetry. The words were an essential part, and the later appearance of purely instrumental music was lamented as a symbol

of decadence. Music was also directly connected with physical education through the dance and the procession, with their religious and military significance. Dancing was an important element in religious and civic festivals and in the theater.

Gymnastics, as a form of education, was older and just as important as music. The pentathlon provided the basic exercises. Greek vases and sculptures show the various forms of activity and the equipment used in them. Among the latter were the boxing thongs instead of gloves, the jumping weights, the punching bag which was not inflated but filled with seeds, the jumping pit and the pickax for loosening the ground, the spear, the discus, and the strigil for cleaning the body after exercise. The Greeks aimed at health, strength, and endurance, and also at skill, grace, and beauty of figure; and the Greek sculptures show how well they succeeded. Gymnastics further had a moral aim, to develop courage, so that, as Plato says, the young man need not "play the coward in war or on any other occasion." Hunting, swimming, riding, the use of arms, and other exercises were sometimes practiced. Physical education was taught in a special school, the *palæstra*, under a special teacher and continued in adolescence and throughout life in the public gymnasiums of which almost every Greek city had one or more. In the latter half of the fourth century the *ephebic* institution was introduced. Then, between the ages of eighteen and twenty, the boy as an *ephebos* received military training and patrolled the frontiers of Attica. At twenty years of age, having received a set of weapons and having sworn the famous *ephebic* oath, he became a full Athenian citizen.

Girls did not attend the schools and, as we have said, they received their education, mostly moral and domestic training, from their mothers in the home. Marriage and the family were closely regulated by law and custom. The women and girls lived in separate apartments, had no share as hostesses or guests at men's social gatherings in the homes, and were kept in almost oriental seclusion. Matrons seldom appeared in public except at religious ceremonies. It was their task to order the household and direct the work of the domestic slaves. Spinning and weaving were typical occupations. Romantic love between the sexes did not commonly exist and was hardly an ideal; but it was the Athenian wife's primary function to bear strong, healthy children. If the marriage proved to be childless the husband could return the wife to her parents together with her dowry. In no sense was she the mental, spiritual, or social companion of her lord. Athens was "a man's town," and except for female participation in religion, Athenian culture was a male culture. Pericles in the famous funeral oration, which has been quoted in part, put the spirit of this phase of it into a sentence: "And if I am to speak of womanly virtues to those of you who will henceforth be widows, let me sum them up in one short admonition: To a

woman not to show more weakness than is natural to her sex is a great glory, and not to be talked about for good or evil among men."

Although the schools of ancient Athens were not secular they did not teach religion as a separate subject because religion was not separate from the domestic, economic, and political life. Greek religion was largely a matter of ritual and ceremony and was to be scrupulously carried out by the individual or the official priest at sacred shrines and on sacred days. The state watched carefully over the public worship of the gods because their aid was believed necessary to the public welfare. There was no church because the Greeks were unable to conceive of a separation between civil and ecclesiastical powers. There was no church because there was no secular state. The state itself performed the functions of a church and the gods of nature were also the gods of the family and the state. Apollo, the god of the sun, was also the god of healing and the fine arts. Poseidon, or Neptune, the monarch of the ocean, took a lively interest in the affairs of men. The sailor who upon rounding a headland saw Athens's golden spearhead shining above the Acropolis saw more than a symbol of his city and homeland. Pallas Athene, the goddess of wisdom, who sprang from the head of Jove, was the spiritual element as well as the protectress of the city of beauty, wisdom, and knowledge.

As Athene presided over Athens, so every schoolroom was presided over by the Muses, and for the schoolboy to play truant or to slight his lessons was to flout the Muses. Religion was taught in Greek schools by means of Homer and the poets and in Greek life by participation in the great public festivals and the smaller religious acts and by the presence of the great temples and statues dedicated to the deities.

As the Greek conception of man's relations to the divine became more spiritualized, the advanced thinkers became dissatisfied with the old conceptions of the gods and their very imperfect morality. Thus Plato would amend Homer to make him teach that the gods (or God) never do evil or cause evil to be done, never mislead anyone, and never change. But the religion of the ordinary citizen included a great deal of crude superstition. For him religion was a means of foretelling the future, of placating jealous gods, of averting misfortune, and of increasing his health or prosperity. The Greek religion contained a minimum of doctrine and a great deal of art, ceremony, and ritual; and rather than a belief it was a spiritual atmosphere in which the whole of Greek life, private and public, was lived. Because it contained so little of dogma and belief and positive intellectual claim it did not tend to hamper investigation as much as later Christian churches sometimes did. Yet we must remember that in 399 B.C. Socrates was executed by Athens, the most enlightened Greek state, for "introducing new gods and corrupting the youth."

4. THE PERICLEAN AGE AND AFTER

The Athens of Pericles jealously guarded its constitutional democracy; but in spite of the political equality there was a small class of so-called best families which really controlled public affairs. With the perhaps unique exception of Socrates only the wealthy and well-born were admitted to this upper caste, nor would Socrates have been admitted if he had accepted fees for teaching. In that case he would have been classed with the Sophists, whom one paid well and treated with outward deference but really despised because they were professionals and no better than tradesmen. Praxiteles, the painter, and Phidias, the sculptor, were only workmen, artisans, in the eyes of the aristocratic class; and the great vase painters who placed the figures of beautiful aristocratic youths upon their creations could gaze upon their models only by stealth and from a distance. And yet the common people of Athens were proud of the social aristocracy. When Alcibiades sent a number of chariots to the Olympic Games and won a race with the speediest of them, the whole populace gloied in the honor which they felt that they shared. This does not really differ from the condition today when a whole city rises to its feet, so to speak, for the local football hero whom most of them never see.

With all their snobbery and more serious misconduct the aristocracy had their value. It was they who erected the structure of higher education and created its materials. The Sophists, most of them foreigners in Athens, were those who undertook to prepare young men for active life and public service. The word was originally taken to mean wise and educated persons; but it came to have a derogatory meaning as in the modern word sophistry, from the polemic which Plato directed against this class of teachers. None of the well-known Sophists except Socrates were Athenians, and this stirred up the opposition which criticism of foreigners usually arouses. As a group they charged fees, sometimes very high fees, and some made excessive claims for their teaching and argumentative powers. A few seem to have had less interest in imparting the truth than in showing how, by rhetorical and logical devices, one might win a case or an argument despite the weight of the evidence on the opposite side. Thus all were smudged with the terms, sophistry and sophistical, which many of them did not deserve.

The Sophists may be given chief credit for the invention and development of the formal subjects of grammar, rhetoric, dialectic or logic, and mathematics. The last of these came to its flowering-point at a later time than the others and will be treated in a later section. The first three, grammar, rhetoric, and logic, became the elementary curriculum of the Middle Ages. Their origins will be treated here.

Literary and grammatical instruction was greatly broadened in the age of Pericles, and from being a subject for schoolboys it now became a study for men. During this period, about 450 B.C., the Sophists Protagoras and Hippias of Elis, who were relatively as learned in their time as Aristotle in the following century, founded the study of grammar as a science. They investigated the speech sounds, distinguished the genders, and the several tenses and moods. As a result of their investigation and influence formal grammar became a subject of study and instruction in higher schools.

It is significant that prose was then studied and cultivated as well as poetry. This led to the development of rhetoric or the art of public speaking. Gorgias, commonly called the father of rhetoric, and after whom Plato named one of his dialogues, came to Athens in the year of Plato's birth (427 B.C.). Gorgias was known for his ornate style, the use of poetical words, symmetrical clauses, a strongly marked rhythm, and parallelism of structure. He had a great influence upon the most famous Greek teacher of rhetoric, Isocrates. Oratory had a remarkable development. It became a science and a profession, useful in the courts and in the popular assemblies, and a deliberately cultivated fine art as well. At the great games the Sophists delivered carefully wrought speeches which were intended to serve as models for their students.

Young men who wished to enter public life needed to acquire facility in reasoning. The Sophists attempted to develop this facility by means of conversation, that is, the dialogue; and from this came the name dialectic for the art of logic. Zeno, of Elea in southern Italy, may be regarded as the founder of logic. He flourished about 460 B.C. Two of his arguments became especially famous. These, which are known, respectively, as the flying arrow and as Achilles and the tortoise, still serve to puzzle students. The Sophists developed logic; and its comprehensive exposition was given by Aristotle. Logic was the instrument of knowledge, and Aristotle was called the "master of those who know."

All three, grammar, rhetoric, and logic, developed as formal disciplines, useful not so much for their own content but as instruments for handling the content of other sciences. Those sciences and subjects which are packed with information, such subjects as history, geography, chemistry, and agriculture, are called realistic, that is, objective and informational subjects treating of "real" things. The formal subjects are implements that aid us in handling the realistic ones.

The realistic subjects were also cultivated in this great period. History flowered in the storytelling of Herodotus and the critical history of Thucydides. Historical and political studies were introduced into the ephebic college, and the orator Demosthenes is said to have copied the history of Thucydides many times as a means of becoming thoroughly

familiar with its contents. Hippocrates of Cos by his personality and achievements earned the title of Father of Medicine and the honorary citizenship of the city of his adoption. Astronomy and geography were cultivated. For Homer the solid earth had been shaped like a shield surrounded along the edges by "the ever-flowing river of Ocean"; but by the end of the Periclean age the most advanced of the Greeks considered the earth as a sphere. The Sophists also taught law and constitutional theory and practice. Even city planning did not escape the writers of this period.

The higher education of ancient Athens, like the primary, was wholly private. There were no state examinations and no state curricula, indeed no set curricula of any kind. Nor did the state provide any support. In spite of the political democracy, the tone of the intellectual life was set by a social aristocracy, as we have already seen. Plato (427-347 B.C.), the greatest of the Greek philosophers and one of the world's greatest thinkers, first organized the higher instruction in Athens at a fixed place and in a regular institution, the Academy. He founded the Academy (c. 387 B.C.) in his own grounds, a grove dedicated to the minor deity Academus. Because he was a wealthy aristocrat he did not, like the Sophists, accept fees. The institution seems to have had a continuous history of more than nine hundred years. It was closed by Justinian in A.D. 529. The scholars of the Academy formed a closed brotherhood and the care which they bestowed upon Plato's writings is doubtless the cause for the excellent state in which these have been preserved. The succeeding heads of the Academy, called *scholarchs*, took over the grounds which formed the home of the school, but the vicissitudes of time compelled the Academy to move on several occasions. It was a research as well as a teaching institution and devoted itself to mathematics, politics, ethics, and other subjects, not omitting botany and zoology. Like the teachers of rhetoric, the philosophers also prepared men for public and private life; and, while rhetoric was supposed to be more practical and especially to serve as an introduction to statesmanship, philosophy came to be regarded as the highest and final discipline of the Athenian educated classes. The theater and practical politics might be considered incidental but effective forms of adult education during this great creative age, which for intellectual and artistic productivity was not equaled until the thirteenth or perhaps the nineteenth century of our era.

5. GREEK EDUCATIONAL THEORY

Everyone has heard of the teaching of Socrates (469-399 B.C.), who is considered the founder of ethics. He turned aside from speculations about the

nature of the physical world to consider the nature of virtue or good conduct. He felt that to "know oneself" would be the most important knowledge of all. He did not conduct a school but went about in the city talking with the youth and trying to develop clear ideas about such virtues as courage, temperance, and justice. He demanded not examples but a definition. Engaging a young man in conversation and pretending that others were wiser than he, Socrates by clever questioning led his respondent to admit that his ideas were confused and his statements self-contradictory, and that he really did not know the essential meaning of the term he had used. This step was called the Socratic Irony, a necessary stage in becoming wise, for no one can learn until he becomes humble and admits his present lack of wisdom.

The next step was Definition. By interrogating men of all classes, shoemakers, merchants, soldiers, or wealthy young aristocrats, and by abstracting what was common to all the plausible definitions and descriptions of such a term as courage, Socrates attempted to arrive at its essential meaning.

The third step, called the Maieutic, was taken in order to draw out the implications of the ideas which had already been defined. An example of the maieutic process is shown in Plato's dialogue, the *Meno*, in which a slaveboy who has never studied geometry draws true conclusions as soon as the figure and definitions of the terms are set before him.

This means that by nature everyone possesses the power to think; and that learning is a process not of gathering information but of seeing meanings. But it should be noted that this conclusion was drawn from a mathematical exercise, not from the study of history. In human affairs, the drawing of necessary conclusions and the making of precise predictions are not generally possible. Even ethics, the special field which Socrates cultivated, is not yet a science. Socrates was not justified in using mathematics as the typical example of the truth-finding process. This criticism should not divert us from the main point, namely, that Socrates, by his Irony, Definition, and Maieutic, began the development of rational methods of teaching. He was the founder, not only of ethics, but also of educational method.

Socrates turned from the study of nature to that of ethics because a generation of orators and teachers had called in question the old Athenian customs and morals and raised doubts about all principles of morality. These teachers were the Sophists. He was also moved to study ethics and politics because Athens was passing through a revolutionary period when the very foundations of government were quaking. He came to the conclusion that "virtue is knowledge" and that a state or an individual life can be good only when it is based upon wisdom. He believed that wisdom could be attained by men, and, although he insisted that he was not wise, he meant to keep on seeking. But in 399 B.C. he was accused of corrupting the youth

by false teaching, was condemned, and was executed by the city which he had tried to instruct. His greatest pupil, Plato, who had been with him for eight years, continued his work.

Plato erected an imposing edifice of educational theory. His teachings are found in his famous dialogues, especially the *Laws*, *Protagoras*, *Symposium*, and *Phaedrus*, and in the *Republic*, from every standpoint his most important work. He was one of the most original and comprehensive thinkers of all time. His views on education were influenced by Socrates, by the Sophists, by Spartan practice, and by current political conditions in Athens.

We shall offer only a brief, simplified account of Plato's theory of education as found in the *Republic*. In that work Plato accepted some of the main outlines of the education and practice of Athens but offered criticism also. The poets, he said, had misrepresented the gods as quarreling among themselves, as changing their minds, and as often doing evil deeds. God must be represented, said Plato, as perfect, unchanging, and never doing evil. The heroes must be depicted as truly heroic and, therefore, as proper models for the youth. Homer must be expurgated before being used in the schools. Music and gymnastic, likewise, were to be simplified and purified in order that they might be fitted to lead the boy to become temperate, courageous, healthy, and devoted to the state.

Plato proposed to extend the educational system to include a series of mathematical studies, arithmetic, geometry, astronomy, and music, and finally logic, or the science of thinking and of final truth. He recognized the practical values of such studies but his main purpose was to teach the meaning and the method of attaining truth as distinct from mere opinion.

In addition to its educational function the school had also a selective function. Pupils were to be sent to school only as long as they received real benefit from the instruction and Plato thought many pupils would be dismissed early in the course because they lacked capacity for advanced study. He considered that only a few were able to profit from the study of logic or advanced mathematics. His scheme of selection was fairly complex and was applied in a series of stages which were intended to select gradually but more and more closely the most able from the less gifted. His criteria were such as the following: love of knowledge, ability to learn, strength and skill, self-control, devotion to the public good, aptness to resist evil and deceit, and capacity for abstract thinking. Those who passed the successive tests and reached the highest levels of wisdom and devotion to the state were to rule the state. The government was, therefore, to be based upon knowledge of principles and truth. Not power or propaganda, but science and philosophy were to control. The philosopher was to be king.

The same scheme which selected the rulers also separated out, first, the working classes and, secondly, the soldiers or defenders of the state. Thus there were to be three classes of citizens. The lowest were the producers of food, clothing, and shelter, the merchants, the bankers, all those who provided the economic resources of the state. These, he thought, were moved mainly by desires and appetites and they were to be controlled by those wiser than themselves. The middle class was composed of soldiers who were to be men of honor and courage. The thinkers or philosophers formed the highest and ruling class. This social scheme was paired with a psychological scheme to which it was parallel and upon which it depends. Each person, said Plato, is composed of three kinds of elements, appetite, spirit, and reason, and these seek, in the same order, wealth, honor, and wisdom. That one is a just or righteous person in whom reason rules the body and the appetites; and that is a just state in which the most completely rational, the wise, rule, the soldiers fight, and the workers labor. The state is an individual "writ large." The problem of the *Republic* is the problem of justice or rightness. Plato's justice, therefore, is a harmony in which all qualities and all individuals are in their proper places performing their proper functions; and, to repeat it in more general form, that is a just state or society in which each individual is in the place for which his nature and capacity fit him, and is doing those things and only those which he can do best.

For Plato the state was "the Great Society," the highest ethical community, which alone made the good life of the individual possible. To the state, therefore, the individual owed a natural loyalty and obedience. Plato's educational scheme was throughout a social, not an individualistic scheme, and this is also true of Greek educational theory as a whole. His ideal state was to have power over the political, economic, domestic, and cultural life of its citizens; and he concerned himself a great deal with the upper classes in all those relations and not with the lower classes. The laboring and industrial groups were considered mainly as means.

Plato feared change because it seemed, and in his day tended to be, destructive, not constructively progressive. He feared ambition, individualism, and egoism, because they destroyed the needed unity of society. The state was to control and regulate property, children, and the family. All selfishness which might stem from family interests or the pursuit of wealth and power were to be suppressed by a firmly established communism. Loyalty to the state was to be the highest loyalty and education the state's highest function.

The educational system of the *Republic* is an intellectualist scheme based upon knowledge and understanding. Virtue is the result of intelligence. This leaves little room for poetry and art and in his more ascetic

moods Plato would have suppressed both. The *Republic* is itself, however, a great work of art as well as of thought, and it has influenced most of the world's philosophers, political thinkers, and educators.

Aristotle's scheme is found in his *Politics*. Either this work was left incomplete or its later books have been lost. As far as we have it, its argument follows Plato closely. Both regard education as a branch of politics, and Aristotle teaches that each form of state, the aristocratic, democratic, or monarchical, has a particular form of education which is most appropriate to it. Education is to be administered by the state. He turns aside from his positive theory to criticize Spartan education, which he considered narrow and brutal. Both Plato and Aristotle began with infancy and the care and hygiene of the young child. Education, Aristotle said, depends upon nature, habit, and reason, and the end is understanding, or contemplation. The elementary subjects, about which "there is a dispute," should be reading and writing, gymnastics, music, and drawing. These are useful in practical life, but the final end is not utilitarian but the development of an actively good man. Human goodness is of two kinds: goodness of character which is produced by habituation, and goodness of conduct and intellect which is produced by teaching. As has already been suggested by his reference to Sparta, Aristotle was opposed to hard and strenuous physical training for boys. Before adolescence only the lighter exercises were to be used. He has an extended discussion of music in education which was to offer pleasure, train character, and provide an outlet for overwrought feelings. We know nothing of Aristotle's views on the intellectual education of the older adolescent and young adult.

6. THE HELLENISTIC AGE (300 B.C. AND AFTER)

The creative powers of the Greek mind were almost exhausted by the time of Alexander. A great deal of useful intellectual work was still being done, but it was less original. It was the work of Euclid, Claudius Ptolemy, Erasistratus, and of the Alexandrian grammarians, men who were not primarily original thinkers but rather specialists, scholars, and interpreters; but their work greatly increased knowledge and it was important. The chief characteristics of the period were that learning now became specialized and thought became cosmopolitan. Greece had lost her independence. Philosophy had been the universal science including all other sciences; philosophy now became differentiated into special subjects such as astronomy, geography, mathematics.

Greek learning and views, overflowing their former national and racial boundaries, were spread by Alexander (356-323 B.C.) among the civilized people of the Mediterranean regions and as far as India. His successors

followed the same policy of conquest; and Greek and Oriental learning and religions were combined into a new but vague and homeless culture. The Greek language became the common language of learning in the East and Greek science, art, and coinage, the common possessions of the Eastern peoples.

Athens long continued to hold her historical supremacy in letters and learning. So in the time of Cicero, Athens was still an intellectual center. But other cities, favored by situation or by the support of their rulers, could also boast of their schools. A professional class of teachers, the successors to the old Sophists, arose and devoted themselves to research and to instruction. The scholar's beard and gown became familiar in Pergamum, Rhodes, Antioch in Syria, but especially in Alexandria which first rivaled and then surpassed Athens as a center of learning. Alexandria was founded by the great conqueror whose name it bears in 332 B.C. Under the rule of the Ptolemies, the Museum, or home of the Muses, and great libraries and schools flourished. The city became a meeting place of Greek, Hebrew, and Egyptian learning, and was famed for philology, science, and mathematics.

Little creative literature, either in poetry or prose, was produced in this period. The great works of the fifth and fourth centuries were now considered as classics, that is, as models. From these examples, rules were drawn as guides to practice. For philology it was, first of all, necessary to have correct, authentic texts of the classics, especially of Homer. The explanation of difficult passages, the solution of grammatical, historical, and literary problems occupied the philologists of the time. Grammars, commentaries, and dictionaries were prepared and became the tools of the scholar and the schoolmaster. Famous teachers laid the foundations of Roman and modern language study.

Science received a strong impulse from Aristotle, who was a student of zoology not only in books but by observation. Charles Darwin in his later years expressed regret that he had not earlier read Aristotle's *History of Animals*. Aristotle's pupil, Theophrastus, was the founder of scientific botany and mineralogy. Dissection was carried on by Alexandrian physicians and prepared the way for the development of anatomy and surgery. Euclid worked in Alexandria about 290 B.C. His system of geometry became a schoolbook and remained for twenty centuries the standard work on that subject; and it is still the chief source of high school geometry. Archimedes also lived in Alexandria for a time; and there Hero (c. 100 B.C.) showed that a reflected ray of light follows the shortest possible path, invented the first steam engine which however remained a toy until recent times, and laid the foundations of geodesy. Hero and Archimedes were physicists as well as mathematicians. Aristarchus of Samos (280 B.C.) developed a system of astronomy in which the earth was supposed to move while sun

and stars were fixed. Eratosthenes was a physical geographer, and Claudius Ptolemy put much of the Greek knowledge of astronomy and geography into scientific form. Like other sciences, geography is based upon two kinds of mental operations, the bit-by-bit observation of earth and heavens by scientists and practical men like sailors and traders and the classification and argumentation which unites the facts into a consistent whole. By such work the Greek world produced maps and charts, another set of tools for use in education.

These advances in science and language gave to education an intellectual character which tended to decrease the importance of music, of gymnastics, and of the moral content of the older schools. Less attention was paid to the all-round education of the classical days and more to a purely intellectual culture. There was a second result. The ideal of an encyclopedic knowledge led, in the Alexandrian period, to a multiplication of subjects and to the growth of specialism. In the schools a fixed group of subjects formed itself into an *encyclopaedia*, which means a circle of the arts and sciences appropriate for the education of boys. Thence came our word *encyclopedia* for a work of all-inclusive knowledge. This was, in part, the result of the internationalizing of Greek culture. The older Athens had a well-rounded scheme of education for her boys. Sparta had a military one. Each was intended to form the citizens of its states. Even in Plato we already see an effort to unite these two; but no Greek of classical days ever dreamed that other peoples, "the barbarians," could desire a similar schooling. Under the Alexandrian influence the distinction between Greek and foreigner tended to fade and that between the learned and the unlearned was raised to a high power. The subjects which were gradually included in the encyclopedia were grammar, rhetoric, and dialectic, the language studies; and arithmetic, geometry, astronomy, music as a science, and other scientific studies. The last four had, indeed, been named in this order by Plato. The whole group, called the Seven Liberal Arts, although the number and content became fixed only in the early Middle Ages, passed on to Rome and came to form the regular, unvarying curriculum of schools. The first three of these were in all times much more widely studied than the last four. Everywhere terminology became standardized, textbooks were prepared, and the school acquired the materials and methods which were to remain with little change for more than a thousand years. Intellectualism, specialism, fixity, and sterility, tended to characterize the secondary education of the later Greek, and of the Roman and the Middle Ages. And these are evils which the school has always had to fight against.

The final stages in the education of a learned man of Hellenistic times were devoted to rhetoric which prepared for public speaking, law, and statesmanship; and to philosophy which was directed toward religion and

morals. Great schools of philosophy were founded: the Academy of Plato, the Lyceum of Aristotle, the Stoic school of the Porch of Zeno, and the Garden of Epicurus. Individual philosophers or Sophists, lecturing for fees which they collected from their hearers and employing "barkers" to bring in new students, featured the so-called Greek universities. These "institutions," however, had no formal unity, no organization, equipment, or requirements. They were merely the customary congregations of students and teachers of the higher disciplines. For centuries the Hellenistic centers were frequented not only by local students but by some who came from a great distance; so, Cicero studied for a time at Athens, Rhodes, and elsewhere, and later also sent his son, the young Marcus, to Athens. This young scion of a great family, provided by an indulgent father with too much money and a fine house, did not become "a second Cicero." There were many such dilettantes, and we may now add another characteristic to the list given above. Education in Hellenistic and in later Roman times tended to become decorative, a means to amusement and idle distinction for young men without serious purposes. In the Byzantine empire and throughout the East a fading Greek civilization lived on, but Rome had already become the ruler and civilizer of the West.

The primary purpose of Greek education was the preparation of citizens. This emphasis upon public ends represents a radical change from earlier practice. Among older peoples, education had been restricted to special classes such as priests, officials, and skilled craftsmen. It had often been controlled by the priests and was regarded as a "mystery," to be concealed from the uninitiated. The Greeks recognized no such mystery and accepted no such restriction.

This statement must not, however, be interpreted too broadly. In Greece there was neither concealment nor control by a priestly caste; and the opportunity for education was open to all the sons of citizens. But the opportunity was also confined to them. Girls were not admitted to the schools of Athens and received only limited training in Sparta. And everywhere both boys and girls of the lowest and more numerous classes were generally barred, and slaves, the most numerous class of all, were altogether excluded. As a result, only about one in eight or ten of the whole population could attend school in Athens or receive training in the Spartan system. The Greeks did not conceive of universal education.

The Athenians developed the materials of secondary and higher education. They created the literary and art forms, several of the sciences, and the tools of learning, such as grammar, rhetoric, logic, and mathematics. The Spartan state communism was entirely unprogressive; but the Athenians and other Greeks, through trade and travel, came into contact with many cultures. Being a creative and inquiring people, they learned from the past and the present and they transformed all that they borrowed. They were observant, critical, and sensitive to beauty. They developed those ideals of art and of political freedom, of free investigation, and of rational interpretation which the modern world still pursues.

The schools had a simple, well-rounded, and active curriculum. They attempted to meet the needs of the spirit, intellect, and physical nature. It has been said that two-thirds of the school program consisted of activities in music and games that most boys must have regarded as play. They kept before the child the idea of public activity in peace and war; and, in the ephebic oath, the young men vowed to try to hand over their city to their successors, "not less than but more noble" than it was when they received it from their elders.

With their independence, they lost also their national spirit. Education became cosmopolitan, technical, specialized, and diffuse. It no longer had a central purpose. Before this occurred, the Greek language had become the universal language of learning throughout the eastern Mediterranean world.

QUESTIONS

1. Consider the following statement: We must necessarily fail in any attempt to explain Greek achievement on the basis of race, geography, or the influence of previous civilizations. True, partly true, or wholly false? Why do we consider the factors named and similar ones?
2. Do Spartan conditions help to explain Spartan education?
3. The ancient Spartan ideals and practices affected later education. Is the modern Spartanism in certain countries likely to affect education in other countries?
4. Distinguish between "formal education" in the sense in which this phrase is used on page 15, formalized education, and formative education.
5. Compare ancient Greek education with the educational provision of an American city or school district, considering the pupils and classes of people, the curriculum, the methods, the equipment, the purposes, and any other features.
6. Why did the Sophists lay great stress upon argumentation and oratory?
7. Why did the Athenian schools give little attention to informational subjects?
8. Why is the Socratic method inappropriate in the teaching of botany?
9. Write a commentary on the passage quoted from Plato's *Protagoras*.
10. Compare and distinguish between the politics and education of Plato's Republic and those of modern totalitarian states.

FOR FURTHER READING AND STUDY

The Homeric poems, in a good translation such as that of Lang, Leaf, and Myers, are the best sources for early Greek life and education. Paul Monroe's *Source-Book in the History of Education for the Greek and Roman Period* (New York: Macmillan Co., 1901, 515 pp.) has selections from later sources. The *Review of Educational Research* (Washington, D. C.) for October, 1939, has a longer reading list on Greek and Roman education than we can provide here. The student should have at hand a good history of ancient Greece such as that by G. W. Botsford, or J. B. Bury.

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- Gardiner, E. Norman, *Athletics of the Ancient World*, London, Oxford University Press, 1930, 246 pp. A detailed treatment by the author of *Greek Athletic Sports and Festivals* (1910).
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- Jaeger, Werner, *Paideia, the Ideals of Greek Culture*, New York, Oxford University Press, 1939-1944, 3 vols.
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- Klein, Anita E., *Child Life in Greek Art*, New York, Columbia University Press, 1932, 62 pp.
- Moore, Ernest C., *The Story of Instruction: the Beginnings*, New York, The Macmillan Company, 1936, 380 pp.
- Nettleship, Richard L., *Lectures on the Republic of Plato*, London, Macmillan Co., Ltd., 1936, 364 pp. A useful interpretation of Plato's Republic. Also useful but less important is the same author's *The Theory of Education in Plato's Republic*, New York, Oxford University Press, 1935, 155 pp.
- Ulich, Robert, *History of Educational Thought*, New York, American Book Company, 1945, 412 pp.
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- Walden, John W. H., *The Universities of Ancient Greece*, New York, Charles Scribner's Sons, 1909, 367 pp.
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3 ROMAN EDUCATION

GREEK ACHIEVEMENT IN THE REALMS OF THE INTELLECT and the imagination was an important factor in the making of the modern mind and society. No one would doubt this. Another ancient civilization which made a great contribution to Western culture was the Roman. Not only were the qualities of these two peoples and of their civilizations strikingly different, but they were supplementary to each other, so that at several important points the strength of one covered the weakness of the other. Rome was strongest in law and administration, in practical work such as architecture and engineering, and in the art of spreading a civilization over wide areas and among many peoples.

The art of spreading a civilization is a form of education, in a broad sense of the word. The Romans civilized western Europe, from which our own civilization was to come. The foundations of this extension of civilization were their native legal and administrative institutions, their technology, and their language and literature. In these fields, although they borrowed much from the Greeks, they were creative. Through the Latin language, the Roman schools, and those powerful institutions, the Roman empire and the Roman Catholic Church, Roman achievements and many of the Greek contributions were preserved and transmitted to the future. The Romans were great educators.

When the curtain of history rises on the Italian peninsula we find its southern parts and a large portion of Sicily settled by the Greeks. They were by far the most civilized of Italy's early inhabitants. The Italic tribes, of whom the Latins were one, occupied the middle of the peninsula, while at the north the fierce, barbarous Gauls had come across the Alps into the valley of the Po and had pushed back the Etruscans. These latter were an important people living in strongly fortified cities and carrying on both agriculture and commerce. The Etruscans were builders of massive walls of hewn stone, of roads, and of imposing tombs. And they were able to write;

but, unfortunately, the little Etruscan writing that remains has not been deciphered.

The Latins lived on the left bank of the Tiber just across from the Etruscans. They were a race of farmers and shepherds. This rural background had great and continuing influence upon Roman life and literature, as may be seen, for example, in Vergil's *Bucolics* and *Georgics* and in the works of many other writers. The ancient Latins lived in straw-thatched huts grouped around hills which they had fortified. Some of these hill towns grew into cities and were united into a league for defense and offence. This people had a common worship and an annual festival which they celebrated on the Alban Mount. By 510 B.C. the Latins had secured for themselves both banks of the Tiber and held a protectorate over a long strip of the coast stretching south from Tiber-mouth and far inland. Two and a half centuries later (250 B.C.) they held all of southern Italy including the Greek cities on the mainland. In the next fifty years they added Sicily, Sardinia, and Spain. Carthage fell to Roman arms in 146 B.C.

We need not follow the expansion of the Roman dominions step by step. When her conquests were completed, Rome controlled all the old countries that bordered upon the Mediterranean Sea: Carthage, Egypt, Palestine, Syria, and Mesopotamia, and most important of all for our interests Athens, Alexandria, Syracuse, and the whole Greek world. In the old days of the later republic and the empire, "all roads led to Rome" and from the center they radiated to all the provinces. Through the mediation of Roman institutions, the contributions of any section of a great empire became the property of all. And yet this gift of disseminating culture was less than it might have been if the Roman nature had been more flexible and receptive.

The Romans had not the restless, sensitive nature nor the inquiring mind of the Greeks; and consequently they did not show so keen an interest in art and pure science. In these fields they were pupils and not always very attentive ones. Scientific investigation did not flourish in Rome; but this we shall consider more fully below. In oratory and still more in philosophy the dependence of the Romans upon their predecessors is very evident. Cicero spent several of the later years of his life in translating the thought of Plato and the Greek moralists into Latin. To do this he had to coin and borrow the words and almost literally to fashion a new philosophical language. Ethics, because it deals with conduct, was the branch of speculation which was most congenial to the Roman mind; and in the works of Seneca and of the emperor-philosopher, Marcus Aurelius, the Stoic ethics is given admirable though hardly original statement. Metaphysics and logic interested them little.

In poetry and history they consciously followed Hellenic models; but they were not mere imitators. Vergil took his idea of the pastoral from Theocritus and of the epic from Homer. But he did not copy Theocritus and Homer. Being a great artist, "majestic in his sadness at the doubtful doom of human kind," he wrote a great poem of his own, not an artless, elemental epic but a great national and self-conscious epic phrased like the *Iliad* in the "statelike measure ever moulded by the lips of man." The *Aeneid* immediately became a schoolbook and has never ceased being a schoolbook since Tucca and Varius published the poem over two thousand years ago. The Latin literature is, however, less original than the Greek, and the Romans were even less creative in sculpture and painting, in dancing and athletics, and in philosophy and science. Their genius was that of adapting means to ends for the accomplishment of objective results. The Romans excelled as doers rather than as thinkers or artistic creators.

1. BEGINNINGS OF ROMAN EDUCATION

Education in ancient Rome was likewise practical; and, as elsewhere among the early culture-peoples, it was carried on in the family. The people, or some of them, must have been able to read in the time of Appius Claudius (450 B.C.) because at that time the Laws of the Twelve Tables were set up in the Forum for their instruction. Boys were required to memorize the text of the laws. This does not prove that there were schools. It is a great mistake to suppose that all people must be illiterate where there are no schools although doubtless many will be illiterate or only slightly literate under such conditions. And it would be a greater mistake to suppose that literacy was the only or the main objective of early education at Rome or elsewhere. Obedience to law and custom, the maintenance of religion and morals were the main objectives of early education. But when schools were established, and sometimes before, attention was directed to the teaching of reading and writing and of arithmetic, all of which were usually taught for practical use.

Whether education was conducted in the family as in very early times, or in the family and the school as in later times, what the Romans most cared about was that the children should acquire and embody the moral and social virtues. Such virtues were piety, which meant love of country, and justice, truthfulness, and gravitas. The family in Rome had a much larger place in life, greater unity and purity, and greater influence than in Greece and the East. The mother, although she had no part in public affairs, was held in esteem, contributed to the family councils, and deeply affected the tone of society. Rome produced such high-minded

women as Cornelia, the mother of the Gracchi, the great leaders and martyrs of the struggle for social justice. Some upper class matrons were educated women who aided in the intellectual as well as the moral development of their sons. Quintilian takes occasion to name a number of these. He makes no reference whatever to girls as pupils in schools, but he was dealing with the highest or rhetoric schools which girls did not attend. Only the elementary school, and perhaps the second stage, the grammar school, were open to them. Roman education like the Greek was chiefly boys' education. In any case only elementary schools existed in the early times. Even these were lightly regarded. At least this has been inferred from the fact that the word *ludus* for the most elementary school means play. The extensive development of grammar schools and especially of rhetoric schools came in the second century before Christ and continued during the empire until such schools had been established in all the important towns, even in the provinces.

Practical education was taken up by the father where the mother left off. The boy was present while his father conducted the religious rites about the sacred fire which was kept burning upon the family altar. He went with his father into the fields and acquired skill with mattock and reaping hook and in the common operations of agriculture. He accompanied his father on social occasions. An upper class boy saw his father deal out justice among his clients and order his business. In the forum he obtained insight into the domestic and foreign affairs of his nation. The public debates were a school of politics and at the same time of public speaking. The tradition of learning by participation and observation was deeply rooted and continued long. Cicero and Tacitus both insist that citizenship and public speaking can be learned only by active participation. "The school is life," was first spoken by Roman lips. Its modern currency does not make it a modern coinage. The fact is, rather, that as schools became more active and practical among the common people of western Europe and America, the old phrase returned. Learning by doing is especially emphasized where doing is considered more important than thinking and feeling. Ancient Rome and modern America are notable for their practical activity and economic interests; and this is the source of their emphasis upon an active school which more intellectual, contemplative, and aristocratic peoples are less concerned to foster.

On the completion of his sixteenth year the young Roman solemnly exchanged his boyhood toga, with its purple stripe, for the plain white toga *virilis*, the dress of a man. With this, if not before, his school days came to an end. In later periods, those who belonged to the aristocratic and official classes or who meant to become orators continued their studies into their adult years.

2. GREEK INFLUENCE

All the peninsular part of Italy was under the control of Rome by 280 B.C. except the Greek cities in the south; and Tarentum, the last of these to hold out, was reduced eight years later. These Greek cities on the coast had grown into wealthy commercial centers. They were also centers of art and letters and a rich spoil for the conquerors. It was from this region that Livius Andronicus (c. 284-204 B.C.) was brought as a slave to Rome where, having been given his freedom, he became a teacher of the Greek and Latin languages. He is sometimes called the first Roman poet because he translated the *Odyssey* into Latin. This became a schoolbook. Other translations were made; and the beginnings of a native Latin literature were further indications of the development of culture and the improvement of education.

In Plutarch and Suetonius we have some mention of the introduction of Greek teachers at Rome. Plutarch names Spurius Carvilius who opened a grammar school about 260 B.C. Ennius was like Andronicus a Greek translator as well as a teacher. He was also the author of a historical poem called *Annals*, which later authors came to use as a quarry out of which they dug old words to salt their sentences. Quintilian, using a different figure, says of him: "Ennius we may venerate, as we venerate groves sacred from their antiquity, groves in which gigantic and aged oaks affect us not so much by their beauty, as by the religious awe with which they inspire us." Suetonius names Crates of Mallos as the first teacher of Greek in Rome; but as he arrived in 157 B.C. this is clearly an error. Crates was however a man of importance and may have given a considerable impulse to Greek studies. The fact that he was allowed to teach at all is significant because, only four years before his arrival, the Senate had decreed that no Greek philosophers or rhetoricians were to be permitted to teach at Rome. Suetonius is on firm ground when he speaks of the gradual growth of Greek studies. He says: "The science of grammar was in ancient times far from being in vogue in Rome; indeed it was of little use in a rude state of society, when the people were engaged in constant war and had not much time to bestow upon the cultivation of the liberal arts. At the outset its pretensions were very slender, for the earliest men of learning, who were both poets and orators, may be considered as half Greek."

The victory over Pyrrhus and the fall of Tarentum had made Rome supreme over southern Italy and its Greek population. A century later (168 B.C.) Macedonia and the mainland of Greece fell to the Roman army. By reason of these conquests and the mingling to which they led, the soldiers, administrative officers, and Roman traders came into close con-

tact with Greek civilization. L. Aemilius Paullus was the commander who conquered Greece. Although too old to acquire the full flavor of her culture, he was not insensible to her charm for he filled his Roman villas with Greek marbles, manuscripts, and slaves; and, most significant, he gave his sons a thorough Greek education. In increasing numbers now, Greek slaves were taken to Italy as teachers, musicians, artists, and personal servants. The upper classes became rapidly Hellenized by employing Greek tutors in the family so that the Greek language might be acquired by natural methods almost as readily and at almost as early an age as the Latin. Greek scholars, finding themselves able to earn a living by giving instruction in rhetoric and philosophy, flocked to the capital. But there was also another side. The lightest, showiest, and the most frivolous products of the Greek mind were also imported. It was noted that new slang, although it appeared first in the coast towns, was almost immediately carried on to Rome. Cicero's father expressed the mind of many, no doubt, when he declared that his fellow-countrymen were like the slaves on his estate in that "the more Greek they know the less they are worth." Cato the Elder (234-149 B.C.) had attempted to stem this tide; but the decrees against Greek philosophers and rhetoricians, which the Senate passed at his instigation, were ineffectual. And it is sufficiently curious that in his old age Cato himself undertook to learn the Greek language. There also developed a fashionable circle who learned Greek as an accomplishment somewhat as a similar class of German aristocrats, in the eighteenth century, learned French. The high born and the wealthy in this way prepared for a social career.

3. SCHOOL EXERCISES (100 B.C. TO A.D. 100)

Schools were private institutions in this period and did not all follow the same curriculum. Yet the Roman genius for organization produced a degree of uniformity which permits us to call this the first organized system of schools with three clearly marked out levels, the elementary, secondary, and higher. In Greece, the organization of secondary education was vague and indefinite; and the university was a chance and customary grouping of students and professors. At Rome the institutions were more clearly outlined. Elementary education began about the age of seven under the *ludi magister*, the master of the play school, who taught boys reading, writing, moral maxims, good conduct; and the Laws of the Twelve Tables. First came the letters, then syllables and spelling, then words and reading. Moral maxims were used as writing copies. The Greek boy learned a poem, Homer, but the Roman boy was taught the laws of his country. Counting and calculating were also taught in the *ludus*. The Romans, like the Greeks, had an inconvenient way of writing numbers, the still well-known Roman

numerals. How inconvenient they were the reader can test by setting himself a sum in division, or even in addition, using these numerals. Calculation was carried out on the counting board, on the fingers, or by purely mental processes. The solution being found, it could then be written down in the Roman numerals.

The second stage in Roman education was that of the grammar school, which received pupils at the age of about ten years and taught both Latin and Greek. Most Romans did not, as Quintilian advised, teach Greek first to their children and Latin afterwards. The grammar school taught chiefly literature; hence the name grammar, from *grammata*, or letters, was translated by the word *literatura*. Grammar, in the sense of syntax, was of course taught as a necessary instrument in the study of literature.

Even as early as the time of Cicero (106-43 B.C.), Roman boys learned Greek not only that they might have a command of that language but also in order that they might be able to profit from the instruction of Greek teachers and the use of Greek textbooks. Greek scholars neglected the Latin as an uncultivated tongue and they even felt some measure of contempt for the Roman culture.

The rhetoric school, likewise, was based upon both Greek and Latin learning; and teachers of rhetoric sometimes taught public speaking in either tongue. But the rhetoric school included much besides public speaking: rhetoric, mathematics, music, astronomy, history, law, and other subjects. Students were given training in three or more types of speeches: the deliberative, dealing with policy; the judicial, dealing with the application of law to cases; and the eulogistic, in praise of some person or deed. The school aimed to prepare for an effective public life in the practice of law, public service, and statesmanship. Although the teachers of rhetoric dealt with much which had no immediate application, their aim was a practical one and included the development of good character both for its own sake and as a requirement in the public service. Many writers have described the rhetoric school. Tacitus, Cicero in *De Oratore*, and Quintilian in the *Institutes of Oratory* are among these; and the last-named book became, at the time of the Renaissance, the most generally accepted work on education. It was widely read and frequently quoted. It influenced the modern secondary school which long regarded training in eloquence as one of its important aims and devoted much of its time to the study of oratorical literature, especially the orations of Cicero and Demosthenes. Thus secondary schools in the Renaissance and later reflected the practice of Rome and the doctrine of Quintilian.

The chief exercises of the ancient rhetoric school were carried out somewhat as follows. The master announced a topic, usually historical and political or legal in character, and involving a statement of facts and prin-

ciples or laws. He discussed with the school the proper treatment of this question and perhaps assigned parts pro and con. Then each of the pupils wrote his draft of a speech which was corrected by the master and rewritten until it won his approval. The speeches having been learned, they were delivered in an appropriate order and this performance was subjected to the master's criticism. Then each oration was repeated to show whether the boy had benefited by the criticism. Finally the master took the theme and treated it as only a master could. In later decadent days the master often invited the public to hear him and made of the occasion a public event which sometimes became the talk of the aristocratic set of the capital city. In republican times the schools had been less sensational. The master in those days was content to prepare good and loyal citizens and to train public servants instead of catering to the perverted tastes of an amusement-loving populace.

4. THE ROMAN SYSTEM AFTER A.D. 100

The Roman schools had reached their highest point of development by A.D. 100. Then came gradual decline, although this did not become pronounced for another century. As a result of their natural genius for system and order, the Roman people were able to organize their schools more definitely than the Greeks. Let us look at this again. There were three levels with distinct aims and subjects. The *ludus* took the child at seven and taught him reading, writing, arithmetic, and good manners and morals. The grammar school received the boy after he had spent from three to five years in the *ludus*. It taught him language and literature, often two languages and two literatures, and also astronomy and geometry, together with the ethics and other knowledge which could be learned from these materials. Even the elements of rhetoric were often taught by the *grammaticus* or teacher of the grammar school; but to this the rhetor tended to object. "Let each stick to his last," was his injunction. The schools of rhetoric were founded on Greek lines and were often at first conducted by Greek teachers. Quintilian included good character as essential to the orator; and so did Cicero. An orator, according to their definition, is a good man skilled in speaking.

Although there were these three levels, the highest can hardly be said to have furnished a higher education, certainly not in the modern sense and not even in the sense of the Greek university. The Roman rhetorical education was usually completed before the youth had become fully mature. The whole of that training was of a nature which would today be called secondary. The lack of the spirit of investigation and absence of student freedom point to the same conclusion. It is true that philosophy was

taught both in the schools and by private teachers, but a university can hardly be claimed for Rome. It early became the custom for young Romans to complete their education in the East, in rhetoric usually at Rhodes and in philosophy at Athens. As familiar examples, we name Cicero, Brutus, Horace, and Titus Pomponius Atticus, who was Cicero's banker, publisher, and friend. Roman education became richer, it was both more literary and more philosophical, than it would have been without the Greek influence. This also made it bilingual, the first bilingual education in history.

5. ROMAN SCIENCE

The Romans' lack of interest in pure science and mathematics had unfortunate effects in education and upon the world at large. If they had been able to acquire and to transmit the Greek wonder in the presence of natural phenomena, the history of the whole medieval period might have been different. The more observant among them admitted and deplored their deficiency. Cicero stated the case exactly when he remarked that "the Greek mathematicians lead the field in pure geometry while we confine ourselves to the practice of measuring." The Romans built great engineering works with rule-of-thumb mathematics; they developed a practical hygiene and sanitation without a Roman science of medicine; and they traveled to and fro over the wide world without any interest in scientific geography. The Roman farmer or country gentleman was a practical and not infrequently a sympathetic or poetic observer of nature, but not an inquiring one; and Vergil was quite in the Roman tradition as a "landscape lover" who sang in tenderest accents of

wheat and woodland,
tilth and vineyard, hive and horse and herd.

A similar mood is shown in Roman art which reproduces faithfully and lovingly the graceful symmetry of vines, flowers, and bees. The Roman saw nature as a farmer and a poet but not as a natural scientist. Theory, experiment, and reasoned conclusion he did not systematically employ.

It might be difficult to find a sufficient explanation for this aversion from the investigation of natural phenomena. The Romans were busy with practical matters, but there was no lack of leisure for study. The peaceful centuries ushered in by Augustus should have been fruitful for science, but they produced no great scientists. The English and Americans are practical peoples as were the ancient Babylonians, and all these have been noted for their scientific work. It has been claimed that at Rome the vogue for magic and superstition even among upper classes was a retarding factor;

and, no doubt, the influence of the rhetoric schools was another. The prevailing Stoic philosophy, while it demanded "conformity to nature," held that nature was made for man. The Stoics studied nature in order to derive rules for conduct, as expressed for example in the sentiment: "Geometry teaches me the art of measuring acres; teach me to measure my appetites, and to know when I have enough." The Stoic attitude of resignation is not favorable to science. For whatever reasons, science at Rome was not creative; and when the springs of research cease to flow the rivers of knowledge soon dry up.

Rome produced no great scientists, but there were a number of writers on scientific and technical subjects. Most of these dealt with practical interests like agriculture, medicine, architecture, the water supply; or they were encyclopedists who presented collections of information. Lucretius, the philosophic poet, was a writer of a wholly different class. Although his great poem, *De Rerum Natura*, contains no new observations or independent theory, its philosophy deeply affected the thought of the Renaissance.

Of the Roman encyclopedists, Varro (116-27 B.C.) was one of the earliest. He was extremely industrious and economical in the use of his almost ninety years; and he has been called the most learned of Roman scholars and most voluminous of Roman writers. He wrote many books, including: *On the Latin Language*; *Res Rusticae*, on agriculture, which was used as a textbook, is still reprinted, and is very pleasant reading for boys who grew up on a farm; and, most important for our purposes, *Of School Studies in nine books*. This became one of the models for the numerous medieval works on the liberal arts. Varro distinguished nine arts by including medicine and architecture along with the seven which later became traditional.

A similar encyclopedist was Pliny the Elder (A.D. 23-79) whose *Natural History* was intended to cover the whole field of the physical sciences. Pliny regards all nature as made for man. Each plant and herb has its medical use and every phenomenon suggests a moral principle. Gibbon described the *Natural History* as "that immense register where Pliny has deposited the discoveries, the arts and the errors of mankind." It is a formless, uncritical work culled from an incredible number of earlier writers including Aristotle. Seneca (4 B.C.-A.D. 65) wrote a work entitled *Natural Questions*. He dealt with astronomy, physical geography, and other large-scale phenomena, which he treated in a philosophical manner. As a writer on nature he is remarkable because he held in common with modern science the hope that our knowledge of nature can be indefinitely extended. "How many discoveries are reserved for the ages to come," he wrote, "when our memory shall be no more, for this world of ours contains matter for

the investigation of all generations." As a moralist the Middle Ages regarded him as almost or altogether a Christian, which, although an error, was a plausible one.

When we come to the applications of science the story of the Romans takes on an abrupt change. They made no advances in medical science and they produced no eminent physician, but they excelled in developing medical education and medical practice. Under the empire, medical societies were formed and a school of medicine was established. The government built halls for medical teaching. The aim seems to have been to provide physicians and surgeons for the army. The same object was aided by the development of a system of military hospitals. The remains of such institutions have been found in old Roman camps on the Rhine and the Danube as well as in the city of Rome where the first one had been established.

Travelers, merchants, and commanders were interested in itineraries. The Romans provided road maps and route books giving distances and other practical information. They made no contribution to scientific geography. Under Julius Caesar, with the aid of Sosigenes, a Greek mathematician from Alexandria, the calendar was reformed. Their use of the arch in buildings and aqueducts as well as their great roads testify to Roman engineering skill. But all this fine achievement stops as we approach the line that divides practice from free investigation in the search for pure knowledge. The narrowly practical nature of the Roman intelligence was one of the causes of Roman decline and of the unprogressiveness of the early Middle Ages; it was, as we shall see, not the only one.

6. DECADENCE UNDER THE EMPIRE

Augustus became emperor in 27 B.C. in a period which overlaps the late Hellenistic centuries. This period, like the Alexandrian age, was characterized by a cosmopolitan spirit and a mingling of ideas, languages, and races. Individualism, with its search for personal culture, with its aestheticism, and with its emphasis on utility and vocation, on the striving for personal success and the struggle to achieve virtuosity, now tended to displace the old national and moral virtues. Language also reflected the change by becoming colloquial and corrupted with foreign words, often the names of imported luxuries and vices. Literature and rhetoric tended to become artificial and bombastic. And there was a decadence also in the field of morality. How shall we interpret the care exercised by Horace's father, a "witness incorruptible" at all his son's lessons? Was he concerned over the possible careless morality of the teachers? Clearly moralists under the empire placed more and more weight upon the selection of teachers, with

especial emphasis upon their moral character. Quintilian, a century after Horace, prefers school education to a family education because of the immoralities of the home. Tacitus speaks of the education of his day as a rhetorical circus. The comparative decadence of both school and home seems certain, although one must not accept too literally the statements of the satirists.

Citizenship was an honor no longer sought as eagerly as it had been because the empire was becoming a centralized despotism. The free citizens were required to bear an almost intolerable burden of taxation while an extravagant aristocracy found ways of evading its due contribution. In the general loss of the old Roman freedom, the loss of freedom of speech was involved. The loss of free speech affected the rhetoric schools where the most unreal situations were now taken as topics. When the schools had been in a healthy state the rhetors assigned topics based upon actual cases in which the facts and law were real and of public significance. In the decadence of the later empire both the facts and the law used in school exercises were often imaginary and even fanciful.

The speeches that were most popular in the schools of the later empire were not deliberative and judicial but culogistic speeches. These permitted the piling up of adjectives which made of the resulting oration a gaudy patchwork of rhetoric in the bad sense of that ambiguous word. Actual questions of public policy could no longer be publicly discussed under the autocratic rule of the late Caesars. The proper response to this condition would have been to close the rhetorical schools. They no longer performed a proper function. But schools in all ages have tended to invent an artificial purpose when it was no longer possible to follow the real one. So it was in ancient Rome. The less the rhetoricians dared to deliberate and pronounce judgment upon living issues the more the schools cultivated the art of talking brilliantly about unreal and unimportant subjects. Even from Quintilian, who wrote in the first century of the empire, we catch glimpses of this showy and hollow rhetoric.

It was in this decadence, when Romans had come to think of what the state would do for them rather than of their duty to their country, that schools and libraries were first aided with public funds. The poor had by that time come to expect bread and circuses; the great demanded power; and the scholars, privilege. Julius Caesar, in the desire to secure the favor of all classes, granted the franchise to the Greek philosophers. That was the first governmental grant of privilege to teachers. Caesar had also contemplated the building of a great national library for which the scholar Varro was to help select the books. The dictator's death prevented this achievement. Vespasian, who ruled from A.D. 70 to 79, began the practice of paying the salaries of teachers of grammar and rhetoric out of the

treasury. This was a new idea; and Quintilian was the first to be appointed to an imperial chair. Later emperors expanded this policy. Chairs in provincial cities were established; and many cities not thus favored established their own municipal professorships. With the development of this system came public competitions which served as qualifying examinations for the prospective professors.

The fifth century saw the final phase of Roman education. Rome fell to Alaric in 410. The Vandals conquered North Africa, and the Visigoths held Gaul and Spain. The population was declining; the central government had grown weak and corrupt; brigandage was making the roads unsafe; and commerce was decaying. In the large cities the schools continued for another century, but their teaching had grown formal. Greek was disappearing from the West. And it was an ominous fact that astrology had become one of the most popular of the school subjects. Education had come to be a veneer and an amusement for those who could still afford it. The Christian church was emphasizing faith and conduct, not learning. The old system was dying. The emperor, Theodosius, attempted to reinvigorate it in the East by founding the University of Constantinople. He was partly successful and Greek learning survived in the Byzantine empire. But Western civilization had reached a turning point, the Dark Ages of the medieval period.

7. ROMAN EDUCATIONAL WRITERS

The Roman writers on education did not compose stimulating and speculative philosophies like that of Plato; but, instead, they discussed practical problems in a matter-of-fact way. The two greatest were Cicero and Quintilian. Cicero's *Brutus* and *De Oratore* provide a very complete description of the education and the profession of the orator in his day. Quintilian wrote the *Institutes of Oratory* which has been the source of many of the ideas of later writers. It is in twelve books and was written a little before A.D. 100. He dealt with early education as well as with the more advanced stages. He advised that the early lessons should be playful, that study and recreation should be duly proportioned, and proposed the use of educational toys. He opposed corporal punishment and urged that children should be won for learning rather than driven to it. He placed great emphasis upon morals and declared that an orator, however skillful he may be, cannot be called great unless he is also good. Most of his work deals with matters of speech, language, rhetoric, and literature. He illustrates the fact, which has been stated earlier in this chapter, that Roman education was much more bookish and less well rounded than Greek education. His overemphasis upon words and style and his treatment of

philosophy betray the further fact that Roman education was becoming artificial. Quintilian was partly aware of this; but his fulsome eulogy of the emperor Domitian suggests that he may not have realized how greatly the independence and virility of the Romans had declined. In the Italian city-states of the Renaissance, Quintilian was read more than any other ancient educational writer. And his book helped to foster the cult of eloquence and the imitation of Cicero, which debased the Italian humanism as it had debased the humanism of Rome.

In considering Roman education, one is almost involuntarily drawn to contrast it with the Greek. The Greeks were speculative, aesthetic, warm, and pliable; but each one was closely attached to his own small city-state. The Roman genius was practical and administrative, the Roman mood austere and puritanical, and the Roman outlook as wide as the known world.

The characteristics of the Roman people shaped Roman education. In early times it was what the education of rude peoples has generally been, namely, a static education gained by observation, participation, and custom. While the young Greek learned a poem, the young Roman learned the Laws of the Twelve Tables. The learning of the schools, when schools developed, was book learning, lacking the music and gymnastics which had given the Athenian curriculum a well-rounded character. As in Greece, the schools were private, but the Romans made one improvement. They organized them into a chain of articulated schools; the *ludus* prepared for the grammar school, and this for the rhetoric school. This was the result of the Roman demand for an orderly system.

Roman education borrowed its higher values and its theory, methods, and advanced curriculum from the Greeks. Roman rhetoric and philosophy were imported from the same sources. And the aristocratic Romans, for the first time in recorded history, studied a foreign tongue, the Greek language. The Hellenization of Roman education was only an interlude between the later republic and the later empire and affected only the upper classes. The originality of the Romans was not expressed in education but in war, law, administration, and architecture, and most of all in their conceptions of the Roman peace and universal empire. For this, a heavy price of conquest and exploitation was exacted. But it made the Latin language the universal language of learning in the West, as Greek was in the East.

In the decadence which accompanied and resulted from absolutism in government, learning became decorative and showy. The cultivation of eloquence, always too prominent in Roman education, became its chief end. Virtuosity in public speech engrossed abilities that should have been devoted to investigation and the attainment of broader and deeper knowledge. Instead of encouraging original investigation, the Romans made second-hand collections of information from earlier and more original writers; and thereby they set the pattern for the Middle Ages. The empire and Roman law set the pattern for the organization of the medieval church. After the medieval period the Roman literary and educational classics played a great part in the education of the Renaissance and later ages.

QUESTIONS

1. What kinds of education did the Romans mean to include when they used the saying, "The school is life?"
2. In what ways and by what means were Roman culture and education influenced by the Greeks?
3. Is it more surprising that the Romans studied the Greek language than that the Greeks excluded all foreign language study from their schools?
4. How did Roman education differ in spirit, content, and organization from Greek education?
5. Explain the function and character of rhetorical instruction as preparation for public life in Rome. In addition to the text, Cicero's *De Oratore* may be used.
6. In what ways and why did Roman education decline under the empire?
7. Analyze the early chapters of Quintilian's *Institutes of Oratory*. Indicate your agreements and disagreements with your reasons for the position you take.
8. Using the edition of W. J. Chase, describe and trace the history of the short grammar (*Ars Minor*) of Donatus.
9. Compare the *iuvenes*, as described by S. L. Mohler, with the ephebes of Athens and the *Ballila* of Mussolini.
10. Compare with the present chapter the account of Roman education in H. W. Johnston's *The Private Life of the Romans*.

FOR FURTHER READING AND STUDY

The Source Book by Paul Mommsen which is given in the list for the preceding chapter has several selections from Roman sources. There is a good translation of Quintilian's *Institutes of Oratory* by J. B. Watson in the Bohn classical series; and another which also contains the Latin text in the Loeb series (New York, G. P. Putnam's Sons). The texts and translations of Virgil, Cicero, and other works which have been schoolbooks for two thousand years are also included in the latter series. A few special studies are included in the present list, but all have a direct connection with Roman education.

- Abbott, Frank Frost, *Society and Politics in Ancient Rome*, New York, Charles Scribner's Sons, 1909, 267 pp.; *The Common People of Ancient Rome*, New York, Charles Scribner's Sons, 1917, 290 pp. The latter book has material on the influence of the Latin language, and also Diocletian's edict fixing "ceiling prices" of goods and services including teachers' fees.
- Becker, W. A., *Gallus, or Roman Scenes of the Time of Augustus*. Translated by F. Metcalfe, London, Longmans, Green and Company, 1876, 535 pp.
- Boissier, Gaston, *Tacitus and Other Roman Studies*. Translated by W. G. Hutchison, London, Constable and Company, Ltd., 1906, 277 pp. Has a chapter upon "Schools of Declamation at Rome."

- Carrington, Roger C., *Pompeii*, London, Oxford University Press, 1936, 179 pp.
- Chase, W. J., translator and editor, *The Distichs of Cato*, University of Wisconsin Studies in the Social Sciences and History, No. 7, 1922, 43 pp.; *The Ars Minor of Donatus*, same series, No. 11, 1926, 55 pp. Each is a translation and history of the use in schools of the work treated.
- Fowler, W. Warde, *Social Life at Rome in the Age of Cicero*, New York, The Macmillan Company, 1926, 362 pp.
- Friedländer, Ludwig, *Roman Life and Manners under the Early Empire*, London, George Routledge & Sons, Ltd., 1908-1913, 4 vols.
- Gwynn, Aubrey Osborn, *Roman Education from Cicero to Quintilian*, London, Oxford University Press, 1926, 260 pp.
- Johnston, Harold Whetstone, *The Private Life of the Romans*. Revised by Mary Johnston, Chicago, Scott, Foresman and Company, 1932, 430 pp.
- Jullien, Emile, *Les professeurs de littérature dans l'ancienne Rome, et leur enseignement depuis l'origine jusqu'à la mort d'Auguste*, Paris, Ernest Leroux, 1885, 379 pp.
- Mohler, S. L., "The Juvenes and Roman Education," *Transactions of the American Philological Association*, 68:442-479 (1937).
- Odgers, Merle M., "Quintilian's Rhetorical Predecessors," *Transactions of the American Philological Association*, 65:25-36 (1935); "Quintilian's Use of Earlier Literature," *Classical Philology*, 28:182-188 (July, 1933).
- Petrsson, Torsten, *Cicero, a Biography*, Berkeley, University of California Press, 1920, 699 pp. There are many accounts of Cicero but this is a very full one.
- Pharr, Clyde, "Roman Legal Education," *Classical Journal*, 34:257-70 (February, 1939).
- Ulich, Robert, *History of Educational Thought*, New York, American Book Company, 1945, 412 pp.
- Wilkins, A. S., *Roman Education*, New York, The Macmillan Company, 1905, 100 pp.

4 EDUCATION IN THE EARLIER MIDDLE AGES

THE MIDDLE AGES MAY BE TAKEN TO SPAN THE THOUSAND years from about A.D. 500 to 1500; but this is only a rough approximation. Roman civilization had been declining during two or three centuries before 500, and for several centuries before 1500 a remarkable revival of culture and learning was in progress. We shall, therefore, divide the Middle Ages into two unequal parts: the Dark Ages, as the fifth and sixth centuries are called, an earlier period of barbarian invasion, civil disorder, and cultural decline; and, beginning about 1100, a later period of progress in commerce, urban development, and education. We shall deal with the former period (500-1100) in this chapter and with the latter in the following chapter.

The Roman Catholic Church was the dominant institution in the Middle Ages. By the sixth century, the old Roman schools, after a long decadence, were closed. The church, through its monastic, cathedral, parish, and chantry schools, became the educator of western Europe. Although the Latin language was the language of the church and the schools, the learning of the schools was not merely Roman learning but included much of Greek and Hebrew culture. Indeed, the major characteristic of medieval education is just this combination of Greek, Roman, and Hebraic-Christian ideas and ideals. We have called the third group of ideas Hebraic-Christian because the church presented the Old Testament through a Christian interpretation. The elements which were combined can be clearly seen by examining the curriculum of the medieval schools. The curriculum was composed of the Seven Liberal Arts and these were divided into two parts, the trivium and the quadrivium. The trivium comprehended grammar, rhetoric, and dialectic, or logic; and the quadrivium included arithmetic, geometry, astronomy, and music. The less advanced schools taught only a part of this curriculum, only the trivium perhaps, and these were called *trivial* schools. This term indicated the subjects taught and not the quality of the work. After the Seven Liberal Arts had been com-

pleted, the most advanced schools added courses in philosophy and theology. As we have shown, these subjects except theology were developed by the Greeks; and theology was also much indebted to Greek thinkers. But the subjects came into the medieval schools not directly from Greece but by way of Rome. They had been given Roman form and much of the content and the speculative spirit of Greek learning had been lost. Many of the Latin Church Fathers, including Tertullian, Jerome, and Augustine, had been educated in Roman schools. In their writing and teaching, the ancient learning still lived but their message was the Christian message. This was derived from the Hebrew and Christian Scriptures. It is, therefore, clear that the school learning of the Middle Ages was a combination of the learning of the Greeks, the Hebrews, and the Romans. It was one important task of the period to make this synthesis.

1. THE CHURCH IN THE WEST

At the beginning of the Middle Ages, the church had been in existence for five centuries. Christianity began with the work of Jesus. He taught that God is our Father; that we, His children, are brothers and should live brotherly lives; and that through His grace we may do so. He taught the infinite worth of the individual. He was gentle, and looked upon children and people of all ages with kindly sympathy and a deep compassion, and upon nature with the eyes of a poet. He did not use the language of philosophy and did not attempt to prove his intuition by argument. His life was a living example of his teaching. The church and the churches tried, almost from the first, and largely in vain, to embody the example and the teaching in rigid doctrinal statements, the Creeds.

Christianity spread quickly to the large cities of the Roman empire. By the middle of the first century (A.D. 50) there was a Christian group in Rome to whom St. Paul addressed his *Letter to the Romans*. Antioch, Corinth, and Alexandria were other early centers of the movement. For three centuries the Christians were often assailed by mobs and persecuted by the government. They refused to worship at Roman shrines, and this was construed as treason. Early in the fourth century Christianity was first recognized as a legal religion, and was accepted by Constantine in 325 as the official religion of the empire.

The Catholic church received her school curriculum through Rome and she also copied the imperial pattern of organization. At the beginning of the Middle Ages the governmental unit of the church was the city with its congregations. This was called a diocese. The bishop was the ruler of the diocese and the head of its clergy. The church of the bishop was called a cathedral; and a school was often attached to it. The dioceses

usually included a varying area about the city, small in the east and in Italy where the cities were numerous and the population dense, and very large in the western provinces and in North Africa where the opposite conditions prevailed. The dioceses or bishoprics were grouped into sees or metropolitanates, under head bishops called metropolitans or, when they were of the highest rank, patriarchs. In all the east there were four patriarchates: Alexandria, Jerusalem, Antioch, and Constantinople, the last being the highest or ecumenical patriarchate. In the West there was only one comparable center, Rome, which became the seat of the papacy and the capital of the whole of western Christendom. The forms of the civil government became the models for the church government.

The church was the main institution for the preservation and transmission of the learning of the ancient world during the Middle Ages. It was the main institution because it was able to keep its organization intact through the successive invasions, the decay of civilization, and the gradual breakup of the civil government. The empire fell; but the church stood. It not only stood but it spread and increased in power. In 476, when the last Roman emperor was deposed, the Bishop of Rome remained, unchecked by any strong secular power, the sole patriarch of Italy, North Africa, France, and Spain. Ireland, where St. Patrick ended his labors about 416, was the last province before the fall of Rome to come under the sway of the church. The first to be added after that event were Scotland and the country of the Salic Franks. In 496, Clovis, the Frankish chieftain, and three thousand of his warriors were baptized. Columba was the great missionary to Scotland. From Ireland and Scotland, Christianity was carried to England, where the monastery of Lindisfarne was founded in 634. Pope Gregory had, meanwhile, sent a party of missionaries into southern England. They established themselves at Canterbury and completed the religious conquest of all that region within a half-century. Next came Germany. Neither the legions of Rome nor the missionaries of the church had been able to secure a permanent foothold on the right bank of the Rhine until the time of Boniface (c. 680-754). He firmly established the church in Hesse, Bavaria, and Thuringia, and founded the monastery of Fulda in 744. This monastery was destined to become a center of learning for all central Germany. Wherever the church was established, its monasteries, cathedrals, and schools were agencies for the preservation and later for the advancement of learning.

2. CHRISTIANITY AND THE ANCIENT LEARNING

To understand medieval education we must study the complex relations which developed between Christianity and the ancient learning. From

the beginning Christianity was in contact with Hebrew, Greek, and Roman ideas. The Hebrew and Roman influences are obvious; and the Greek influence is apparent in the New Testament, especially in the fourth gospel and the writings of St. Paul. But Greek thought also affected Christianity directly through the Greeks and Hellenized Jews who became members of Christian congregations.

The Hellenizing of many of the Jews had taken place several centuries before Christ. One evidence of this was the Greek version of the Hebrew Scriptures called the Septuagint. This translation was made in Alexandria and it shows that there was a large and influential section of the dispersed Jewish people who preferred a Greek to the original Hebrew text. When the New Testament writers quoted from the Old Testament they used the Septuagint version. The union of Hebrew and Greek thought is also indicated by the work of Philo (c. 20 B.C.—A.D. 53) who taught at Alexandria. Philo was a faithful Jew; but in his philosophy he was a Neo-Platonist. He was convinced that the Greek thinkers had drawn all that was truest and best in their thought from the Hebrew Scriptures; and he attempted to show that there was no essential conflict between the two. Christianity also was deeply affected by Neo-Platonist thought. Neo-Platonism taught the real unity of man and God; but man was bound in the toils of matter and the evils of the flesh and he could win his way back to his real home by overcoming the material phase of his being and participating fully in the spiritual Reason or Logos. Western Christianity was influenced by the Roman tradition also. St. Paul's *Letter to the Romans*, written about A.D. 53, shows that the Roman Christians of that early time were already more institutionally minded and more inclined to follow authority and law, that is, more Roman, than a religious mystic and individualist such as Paul was could approve.

In two centuries after the Christian religion and Greek philosophy met face to face, the religion had itself become a philosophy for many. "We teach the same as the Greeks," said Justin Martyr (c. 100–165), "although we only are hated for our teachings." "Our books show," said Tertullian, addressing the emperor, "that our doctrines are not new"; and even our opponents admit that Christianity is a philosophy, teaching the approved virtues of chastity, justice, and temperance. "Therefore," he added, "you should not persecute us."

Other opposing tendencies within Christianity struggled for mastery from early times. One was the ascetic attitude which led men to renounce the world. Opposed to this was the missionary spirit which led men to attack the evils of the world. And the great body of Christians were neither monks nor evangelists but laymen who followed ordinary vocations without accepting the world's beliefs or indulging in its immoralities. Some

Christians rigorously excluded all pagan literature from their lives. One of these was Tatian, born about A.D. 110 and liberally educated in Greek learning. He had a speculative mind and was won for Christianity by its monotheism or, as he said, "by the assertion of the government of all by one Being," a doctrine which, at one stroke, liberated him from "the tyranny of a thousand demons." In his *Address to the Greeks* he launched a violent attack upon pagan thought. Another, already mentioned, was Tertullian, born in Carthage about the year 160, deeply schooled in philosophy and rhetoric and intended for the law. As a Christian he became an austere puritan who, in hostility to pagan learning, outdid Tatian. Christianity was to him a mighty supernatural reality which had no concern with the pallid theories of the philosophers. In Greek philosophy, it seemed to him, lurked the sources of all future heresies, a view widely held in later times. But even Tertullian was unable to do without the secular learning he so vigorously assailed. This is a symbol of what happened in the church at large. Pagan learning could not be either accepted or rejected; a middle ground had to be found.

With a little historical imagination we can bring home to ourselves some of the difficulties of the Christians in those times. Daily life presented many scenes, in the circus, the theater, the games, and even in the school celebrations, that to Christians were repulsive and scandalous. All the literary schools were pagan, and ceremonies and festivals dedicated to the gods were a part of the ordinary school program. Some of the books studied were the very same which Plato had condemned for their low morality and false religion. Quintilian too had said: "The Greeks are licentious in many of their writings and I should be loath to interpret Horace in certain passages." Why should we be surprised that Christians condemned schoolbooks which had offended the moral sense of Plato and Quintilian? The old system of thought and ritual continued to have a strong appeal as the effort of Julian (r. 361-363), unsuccessful though it was, proves. The ideas of Christian home and pagan school not only were different, but violently contradicted each other. Was it wise to expose a boy to such cross-currents; and what could be done to avoid it without denying him the opportunity for a liberal education? Tertullian, in a passage on "the difficulties of schoolmasters," attempted to deal with the problem; but there was really no answer that was satisfactory to the Christians until the schools themselves became Christian.

Attempts to set up Christian schools were made in the second century. These were the catechumenal and the catechetical schools. Although their history is obscure, it appears that catechumenal schools were organized by individual churches to induct catechumens, that is, new believers, into the

doctrines, discipline, and morals of the church and thus to prepare them for membership. They taught the Scriptures and the hymns of the church and performed the functions of a modern Sunday School or communicants' class. Perhaps they met for only one or two hours a week. The instruction cannot be compared to that of the regular schools of literature and rhetoric.

The catechetical school was more ambitious. It was one of the main agencies through which the synthesis of philosophy and church doctrine was achieved, and it was of the same type as the schools of the philosophers. Each catechetical school was a private lectureship or chair occupied by an outstanding teacher. One would expect Alexandria to have provided the conditions for such a school. About 125 Basilides opened a school at Alexandria for the philosophical teaching of Christian doctrine. This may have been the first. His disciple Valentinus established a similar school at Rome. Another Alexandrian catechetical school whose history is more fully known was founded in 179. Two of its famous teachers were Clement (c. 150-c. 220), and Origen (c. 185-c. 254). Origen established another one at Caesarea; and others existed at Antioch, Edessa, Nisibis, Carthage, and other places.

The catechetical schools seem to have taught chiefly theology, but also the philosophy and science which were necessary to the consideration of theological questions. Their purpose was to defend Christianity against attacks from the outside. In this, Origen was the master mind of his age. His educational practice is described for us by Eusebius, the first great church historian, who wrote in the fourth century. It was an individual method of personal consultation and argument, but he also directed the reading of his students and delivered lectures. The catechetical schools gave advanced instruction to mature men and their purpose was apologetic, the defense of the church doctrines against the attacks of pagan philosophy. Neither the catechumenal nor the catechetical school could take the place of the ordinary elementary and secondary schools. For general education, children had to be sent to Greek or Latin schools although some of these were from an early period conducted by Christian teachers.

That there were Christian teachers in some of the regular schools in the early centuries is shown by Tertullian's writings and also by Julian's decree in the middle of the fourth century against Christian teaching in the literary schools. Meanwhile the homes gave moral and religious instruction to counteract the pagan influence of the schools. The problem was not solved at any given time, but the desired result was achieved gradually in the course of centuries. The edict of Justinian (529) closing the pagan schools was hardly needed because most of these institutions had already disappeared.

3. THE PRESERVATION OF LEARNING

In the difficult transition from the empire to the church, much knowledge and many books were lost. Much was also saved by the copyists, the schools, the great churchmen, and the less great but useful writers of textbooks. Among the great churchmen was Jerome (340-420), one of the most learned men of the early Roman church. He devoted most of his life to literary work, and at the request of Pope Damasus he prepared the Latin version of the Bible which is known as the Vulgate. This was his greatest work, but he wrote much, including many letters. The admiration Erasmus felt for him is not surprising, for the two had much in common. Among other similarities, each had a sharp tongue. Augustine (354-430) was a colorful, many-sided individual, a great philosopher, and a great writer. His glowing *Confessions*, which portray his education and the growth of his mind, and the *City of God*, which contains his philosophy of history, are important sources on the educational conditions of his time. In a book on doctrine, he recommended the study of classical literature as a preparation for theology.

The *Consolations of Philosophy* by Boethius (480-524) was loved and read for many centuries. Boethius also wrote textbooks on arithmetic, geometry, and music. He had planned a Latin version of the works of Plato and Aristotle but completed only a small part of this large project. It has been said that if he had succeeded in providing a translation of Aristotle's *History of Animals*, or any good book on an observational science, "the whole mental history of the race might have been different." He completed a small part of the logic of Aristotle; and this had an important influence upon medieval thought.

The Seven Liberal Arts were treated in *The Marriage of Philology and Mercury* by Martianus Capella, a fifth-century writer. This title may be paraphrased as the union of learning and practical affairs. The book was an arid and fantastic allegory, but it was extensively used as a schoolbook, in the cathedral and the monastic schools, after the first difficulties of grammar and rhetoric had been mastered.

For aid in mastering those earliest difficulties, the pupil was directed to Donatus, who wrote a short grammar, the *Ars Minor*, and also a longer textbook in the same subject. The *Ars Minor* was in such universal use all through the Middle Ages that in Chaucer and other writers "donatus," or "donat," is the name for any grammar textbook. A more extended grammar was written by Priscian, who flourished about 500.

Cassiodorus, who served King Theodoric the Great (c. 454-526) and his successors as secretary and minister, founded (c. 540) the monastery of

Vivarium, or Viviers, in the extreme south of Italy. This afforded him a learned retirement near the sea after his public life was ended. His books of "instructions in sacred and secular letters," written for his monks, dealt with the Seven Liberal Arts. He wrote a *History of the Goths*, in twelve books; and he published the public documents and letters which he had written in the name of his royal masters. He devoted his wealth to the collection and copying of manuscripts and thus saved many works from destruction. One of these was an ancient, illustrated herbal which, as he said, "describes and figures the herbs of the field with wonderful faithfulness." The practice of dating events from the Christian era is said to have originated in his monastery; and there also the number of the liberal arts, which had varied somewhat among the Romans, was settled. Until then architecture, medicine, and other subjects had sometimes been included; but, thereafter, the seven we have named became canonical.

The *Etymologies* of Isidore of Seville purported to be a compend of all knowledge. But Isidore had neither the philosophic interests of Boethius nor the learning and genial outlook of Cassiodorus. The *Etymologies* was a compilation, in twenty "books" or chapters, dealing with forty or more subjects extending from agriculture to medicine and public games. The contents of some books are extremely diverse. For example, Book IX deals with languages, races, kingdoms, the army, citizens, and kinship. Much of the material was taken at second hand. Such encyclopedias, sometimes even drier and less nourishing than the *Etymologies*, became common in the Middle Ages. Isidore's work was so popular that it was included in most medieval libraries.

The decline in learning had begun in Roman times; and this tendency was accelerated in the dark sixth and seventh centuries through the invasions, the decrease of wealth and population, and the growing distaste of churchmen for secular learning. The investigative spirit was never as strong in Rome as it had been in Greece, and it was further weakened in the Middle Ages; the lack of investigation was accompanied by the relative absence of both the critical sense and the historical sense. The habit of taking a knowledge of words for the understanding of things, the practice of summarizing large fields of learning in meager outlines and of compiling from previous compilations became almost general. We have called this section, "The Preservation of Learning." Many books were preserved that, for a long period, were not much used; but it is important to understand that the best way to preserve learning is to use it and to attempt to advance it. The early Middle Ages tended to forget this, because the churchmen studied secular learning merely as a preparation for sacred learning; but, as we said in the first chapter, for fruitful learning, intrinsic interest is necessary. This was lacking in the period we are considering.

4. THE MONASTERIES AND LEARNING

Asceticism was implied in many of the philosophies and religions of the ancient world; and monastic practices and institutions were widespread in India and China, as in some religions with which early Christianity came into contact. Chastity was an obligation of the vestal priesthood in Rome. The priests of Isis were forbidden the use of woolen clothing, of wine, and of many articles of food, and monasticism was definitely recognized. Cloistered ascetics under strict rules were a part of the temple service of Serapis, and in the worship of Mithra monks and virgins of several grades were employed. Monasticism was, therefore, not peculiar to Christianity; indeed for two centuries after the Founder it was hardly to be found in Christianity. Nor, if we except two relatively unimportant sects, were monastic life and ascetic practice found among the Hebrews.

The word monasticism comes from the Greek word "monos" meaning alone. Monks ought, according to this derivation, to live as hermits; but the purely solitary condition of life proved too drastic for most people. It was also too individualistic and socially useless to secure permanent approval, at least among an active people. Men are by nature social, as Aristotle pointed out, and any institution for average humanity has to recognize this fact. In the monastery, as it developed in Europe, the monk's individual cell gave sufficient opportunity for solitary retirement and meditation while the common services and the cooperative work of the institution provided the humanly necessary social life. The vows of poverty, chastity, and obedience, the daily work and the services of worship, the meditation and silence, provided quite enough self-denial. It should be understood that the vow of poverty applied to the monk as an individual only. The monastery as an institution could hold property and often became wealthy. Wealth and resulting luxury, indeed, often led to a decline in monastic fervor and gave occasion, over the centuries, for numerous reforms of the monastic life.

In the fourth century, monasticism was introduced into Europe. The disorders of the invasions and the disturbed conditions of the time drove many into the monastic fold. Among the early leaders were St. Martin of Tours (371) and John Cassian (415). But the great organizer of monasticism in the West was Benedict of Nursia. At a time traditionally given as 529, he established a monastery at Monte Cassino in Italy and formulated the most influential of monastic Rules. By Rule we are to understand a system of life and government for the monks, who are hence called regular clergy, from the Latin word "regula," meaning rule or constitution. Priests and other clergy who did not retire into a monastery to

live in accordance with a Rule but remained active in the "world" were, by contrast, known as secular clergy. There were other monastic rules in the West, but as the Benedictine was the only one that was widely applied, the earlier half of the Middle Ages is often called the Benedictine period. The order spread gradually from Italy, and in about two and a half centuries its houses were established even in the British Isles and in Germany.

The Rule of St. Benedict shows that its author had considerable understanding of human nature and a gift for organization. The discipline was strict but not too severe for zealous men. At the head of each monastery there was an abbot who, although empowered to command obedience, was required to consult all the brothers down to the humblest before major decisions were made. Novices had to undergo a period of probation. When this was safely passed the irrevocable vows of chastity, poverty, and obedience were administered. Stress was placed upon worship and work, especially worship; and the whole day was to be occupied, for Benedict called idleness "the enemy of the soul." To prevent idleness, the Rule divided the day into seven periods of which four were spent in worship and the rest in manual labor, chiefly in the fields and shops, and in reading. The Benedictine Rule and the practice of the monks helped to dignify labor. Under monasticism, work became the normal occupation, not of slaves as in Greece and Rome but of freemen and brothers. Each monastery became a hive of industry. Much of the agricultural development and restoration of Europe was due to the monks who drained the swamps, cleared the land, and transformed deserts into gardens. Since renunciation of the world and retirement from it were at the very foundation of monasticism, the houses were often located in secluded and even desolate places which gave opportunity for improvement.

A worthy form of labor was that of copying manuscripts. A specified period of each day, varying with the season, was given over to reading. Books were given out for this purpose and supervision was often provided to ensure that they were read. One brother was appointed to read to the monks during meals. This implied the existence of a library, and an old saying had it that "a monastery without a library is like a castle without an armory." Books had to be manufactured on the spot, for the most part; the parchment was prepared, the desired manuscript was copied, often with beautiful illumination, and the work was finally bound, frequently in rich, decorative covers. Such books were so costly that only the wealthy, or societies like the monasteries, could own them. The wide dissemination of learning had to wait upon cheaper books. Those who had a taste for reading and literature had almost no refuge in the early Middle Ages except the monasteries.

Monasteries were not always small institutions. They varied greatly in size, but some comprised numerous buildings such as hospitals, quarters for travelers and for the poor, kitchens and refectories and dormitories for several hundred monks, farm buildings and shops, residence halls with separate cells for individual monks, and always a church. Upon the monastery church a great deal of the love and wealth of the society was lavished. The main monastic buildings were often grouped around a green quadrangle called the garth. Surrounding the garth there was an open arcade or colonnade called the cloister. This word and its adjective, cloistral, are often applied to the monastery or the monastic life in general. Hence also comes the term cloistral schools.

As monasteries were often large so, in the prosperous days of the system, they were also numerous. New ones were continually founded and the old ones remained. At the Reformation, England counted more than six hundred monasteries, with more than one hundred hospitals and about an equal number of important monastery schools. In France at the Revolution, two hundred and fifty years later, there were one thousand abbeys of which about one-fourth were for women. Spain had a similar number. They were most numerous in Italy which in the nineteenth century suppressed more than two thousand monasteries.

We have already named a few of the monasteries which were famous for their educational endeavors. Cassiodorus of Vivarium, by example and writing, had a great influence upon monastic education. St. Patrick, who lived for a considerable time at Lerins in southern France, spread Christianity in Ireland in the fifth century. Under his direct successors a group of institutions famous for their learning were founded in Ireland. The Irish monastic schools were at their high point in the sixth and seventh centuries when learning was in danger of extinction on the continent. The Irish monks became missionaries of both religion and learning. We have noted their influence in Scotland and England. Wearmouth-Jarrow in England was in the eighth century the home of the Venerable Bede (673-735), the author of the *Ecclesiastical History of the English Nation* and also of several important schoolbooks. The Irish helped to re-Christianize Europe after the Dark Ages. Columbanus set out from the Irish monastery of Bangor and planted a similar institution in Burgundy at Luxeuil. His disciple Gallus gave his name to the Swiss foundation of St. Gall, while Columbanus went on to found Bobbio in Italy. Neighbor to St. Gall was the famous monastery of Reichenau. Fulda in Germany we have already named. Intermittently, Monte Cassino, the mother monastery of the whole Benedictine order, was educationally important. Many others had a notable share in the preservation and progress of learning in a time when learning was in need of friends.

5. THE MONASTIC SCHOOLS

Schools were a practical necessity in monasteries because boys were often dedicated to the religious life at seven or earlier. These children, as well as illiterate elders, were to be taught to read and sometimes to write. Not all monks in all periods were able to read, but we have no figures. Again the monastery frequently accepted pupils who were not to be dedicated at all. In this respect, also, practice varied, and, indeed, few statements about monasticism are true for all times and places. St. Benedict admitted the children of some of the rich Roman families into his school. In the Dark Ages, the monastery or convent in many places offered the only opportunity for schooling. Those children who were intended for the monastic life were called oblati, and the others externi. At times and in some monasteries there were two schools, inner schools for the oblati and outer schools for the externi. The outer school was placed outside the walls as a separate boarding school, but such a plan could be carried out only in larger institutions. Poor boys might secure their maintenance without loss of self-respect by begging or might earn support by working. The schools did not charge fees but were glad to accept donations from wealthy patrons.

Books for use in the schools, and service books and Bibles for use in the church, were produced in the scriptorium or writing room. Chronicles and lives of the saints were written. Bede composed his *Ecclesiastical History* in a monastery.

Early in the period, some of the monasteries began to collect books for the use of their members. The monastic Rules, beginning even with that of Pachomius, contain directions for the care of these collections and for loaning books to the monks. The supply of a particular monastery could be increased in various ways: by gift or purchase; by making duplicates of books already in the collection or borrowed for this purpose; and finally by the writing of new works by monastic chroniclers or other original authors. The collections, small in the early centuries of the Middle Ages, gradually grew until in late medieval times the more intellectual centers had acquired considerable libraries. Alcuin in the eighth century listed about forty authors who were represented in the library at York. There were included in that library numerous Church Fathers, several of the Latin classics, some grammarians, and some late Christian writers. This collection is often cited as an example of the scholarly opportunities of Alcuin. It must be judged from the standpoint of its time when few other institutions were equally well stocked with books. The arts, politics, law, medicine, mathematics, the sciences, and many other large departments were hardly represented.

Libraries increased rapidly in succeeding centuries. In a fire which destroyed the monastery at Croyland about 1100, a library of seven hundred books was lost. Two or three centuries later a monastery of similar standing might have had one or even two thousand volumes. In the late fifteenth century, the German monastery of Sponheim, under a learned and vigorous abbot, had two thousand books. A number of monasteries manufactured books for sale or exchange and, when printing was invented, some of the early presses were set up in monasteries. The first English printer, John Caxton, set up a press in the abbey of Westminster, whose abbot was one of his most munificent patrons.

Such facts must not lead one to overestimate the intellectual activities of the monks; and it will be a wholesome safeguard against such overestimate to remember that the monasteries were always primarily religious, not intellectual, institutions, and were always based upon the principle of renunciation. Libraries and schools were ancillary and not primary features of monasticism.

The monk who was set to direct the school or schools was called the principal or head master, if we take a literal translation of the words used. Most of the schools were very small, but when they became large, assistants were provided. The schools of Corvei, founded in 817, sometimes required the services of twenty or more of the brethren. To prepare monks to take part in the services of the church, instruction in song and chant was given by a cantor who sometimes also had charge of the library and scriptorium. That the young might be guarded against violation of the rules and against frivolity, idleness, and sin, a watcher or "custos" was named. If the pupils were few they were all taught together; otherwise they were divided into separate groups and classes; but, in any case, much of the instruction was oral and memoriter.

Monastic school discipline in the West was usually strict and somber. The boys, one may be sure, did not always benefit from a relaxation of the Rule intended for their elders. The oblati were given little opportunity for play; and when monastic reformers were in control, the rule of silence was enforced upon small boys, even in the pauses between lessons. The rod, or more frequently a bundle of switches, compulsory fasting, and confinement were the usual punishments. The way and spirit in which they were used must have varied widely. Long school vacations seem not to have been common; but there was a multitude of feasts and holy days, somewhat irregularly distributed through the year, in addition to the Sundays. The most joyful and even boisterous day of the school year was Childermas or Holy Innocents' Day, the twenty-eighth of December. On this festival the children were the masters and were allowed to put their usual enemies, the teachers, into their proper place.

The general course of study was everywhere the same. It comprised the elements of Latin, followed by the Seven Liberal Arts. Pupils in the school, like the monks in the cloister and in the church, had to speak in Latin. One of the first tasks of the school was, therefore, to teach this language, which to most of western Europe was not the common tongue. The ordinary words and phrases were taught at first through the boys' own vernacular, but this was discontinued as soon as possible. Of the formal subjects, the first was grammar. When the boy had mastered the rudiments he was set to read the fables of Aesop in the collection of Avianus (c. 400) and the moral sentences known as the *Distichs* of Cato. This little book in couplets was not written by Cato but it was in existence in the fourth century and was used as a beginning reading book for a very long time. One of the main problems was that of building up a vocabulary. Verse helped in locating the "longs" and "shorts" in Latin words. Music was taught to the small boys along with the grammar and reading since it was important for participation in the church services.

For further reading matter the master might turn to Vergil or to some of the Christian poets like Prudentius (c. 400), and to the psalms. One of the great difficulties was the costliness of books and hence their scarcity. A monastery might have a considerable library without being able to supply individual schoolbooks to its pupils. Not more than three boys to a book was the aim of one cloister. There was no paper or other cheap writing material and hence no easy way to provide for written exercises or notebooks.

Rhetoric followed grammar. But it was no longer the rhetoric of the ancient world. Oratory was of no use to those who had retired from active life. Even preaching did not, according to Isidore, require "the rhetor's wordy display." The rhetoric of the Middle Ages, therefore, dealt with composition, letter writing, the keeping of chronicles and monastic records, and with legal papers. Indeed the very word clerk, in both French and English, meant clergyman; and "benefit of clergy" was conferred upon those who were able to read and write. The elements of law and the drawing up of legal papers, sometimes called "dictamen," became a branch of rhetoric. *Ars Dictamen* is the title of many medieval schoolbooks. Dialectic or logic was the third subject and was based upon some slight remains of Aristotle until the later twelfth and thirteenth centuries, when the complete logical works of Aristotle were recovered.

The group of four subjects which followed the trivium, arithmetic, geometry, astronomy, and music, was called the quadrivium. Only a few of the pupils who completed the trivium also undertook the mathematical and scientific studies of the quadrivium. Several of these latter subjects were of importance in the calculation of the movable festivals of the

church, such as Easter. This art was called the *computus* and special books were devoted to it. Arithmetic still followed the Greek and Roman tradition and used their clumsy notations. The astronomy of the monastic schools followed Ptolemy, of course, but it was only a meager treatment. Even so, it contained encyclopedic materials from meteorology and geography. Geography was also mixed with the subject of geometry. The usual text in geometry was not Euclid, whose work had been practically lost, or even the text of Boethius, but the sixth book of Martianus Capella. He dealt chiefly with geography but at the end he stated a few of Euclid's propositions. The common remark is probably correct that in the earlier Middle Ages few were able to pass over the "*pons asinorum*" or "bridge of asses," as the fifth proposition of Euclid was called from the resemblance of its figure to the truss of a bridge. Geometry, really geography, included a good deal of an uncritical and credulous natural history borrowed by the medieval textbook writers from Pliny and by him from all the libraries of Rome. These writers were not interested in cause and effect or in practical use but rather in remarkable occurrences, strange races, animal monsters, and, in general, the unusual. This was the state of school learning. There were some scientific observers of nature in the Middle Ages, but their work did not influence the schools. Music, as a subject of the quadrivium, was a theoretical study based upon Greek sources and taught from the work of Boethius.

These were the school studies which everyone pursued who proposed to become a scholar. These were the basic studies in the schools of Europe for about a thousand years. They were pursued, not for themselves, but as a preparation for the highest study of all, theology, "the queen of the sciences." Obviously education in the monasteries did not exist for its own sake. It had a religious purpose. The school existed for the monastery, and the monastery was for the deepening of the spiritual life and the salvation of souls. Training and practice in the Rule and instruction in religion began immediately when novices were admitted and accompanied all the work in the subjects we have described. That was the important matter required of all. The intellectual training was less important.

We may here consider some of the religious teachings and practices. Benedict's description of a well-qualified master of novices is that he should be "a person fitted for winning souls." Immediately upon admission to the cloister the novice began his year of probation which was to end either in his formal acceptance as a brother of the house and order, or in his rejection. His instruction began with matters of form and custom: how to wear his habit and cowl, how to walk and bow on various occasions, a somewhat complicated matter, and in general how to deport himself with monastic decorum. Control of the eyes, showing respect for brothers and

superiors, the rule of silence, all demanded study and practice. The Rule, prayers, psalms, and hymns were committed to memory. He learned to sing and chant. He was to become familiar with the Holy Scriptures and he received the instruction which prepared him for confession. Such was the elementary religious instruction that accompanied his literary studies.

The deepest trough of the depression in education is to be placed in the sixth century. But conditions varied in different regions, and this was a century of great activity in Ireland. A further revival is linked with the Carolingian line of sovereigns in Frankland. The revival began under Charlemagne's predecessors but was carried to its high point in his own reign and under his own leadership. To this movement we must now turn.

6. REVIVAL UNDER CHARLEMAGNE—CATHEDRAL AND PARISH SCHOOLS

Charlemagne, or Charles the Great (742-814), was one of the great men of history and his period is one of the great moments in the development of Europe. In 732 his grandfather turned back the Mohammedans at the decisive battle of Tours. About the same time the eastern emperor relinquished his ambition to control the West. These events made it certain that civilization in Europe would be Christian and not Moslem, Occidental not Byzantine. When Charles came to the throne in 768 the current of progress was, therefore, already in motion, but he gave it new impetus and helped to construct the channels in which it was to run. If it were not for the tradition of the historians, the time of Charlemagne would make a reasonable beginning of modern history.

Charles was not only a great man but a very attractive figure. His biographer speaks of his merry eyes; he was tall, robust, and well proportioned. Whether in action or repose he impressed everyone with a sense of dignity and authority. He was great as a commander, as a ruler, as a builder; and to the church he was a faithful son, although his personal life did not always embody the church's ideals. As a statesman he realized the power of opinion and morale and, therefore, of education and religion, but he was also interested in ideas for himself and for themselves. Although he never learned to write, he was an eager student of ideas and a liberal patron of the arts.

To his court at Aachen he invited every kind of talent. His educational counselors included three from Italy, still the most cultivated portion of his empire and most closely connected with the Roman see. These were Peter of Pisa, Paulinus of Aquileia, and Paul the Deacon, who wrote a *History of the Lombards* which won the praise of Gibbon. Another, Theodulf, came from southern France or Spain. Charles, who appointed

his own bishops, made Theodulf bishop of Orleans, and this scholar became one of the emperor's staunchest supporters. He was also a poet and author of the hymn "All glory, laud and honor." Best known of Charlemagne's educational advisers was Alcuin (735-804) from the cathedral school of York where he had been educated in the Roman church tradition—a requirement to Charles who, as early as 769, had declared his whole-hearted "allegiance to the apostolic see in all things." Alcuin had qualities adapted to the life of the court. He was big and burly, fond of jokes and riddles and of the pleasures of the table. Most of his poetry is light and when it is serious it is dull. He was loved as a teacher, influential as an adviser in educational policy, but not a great scholar or a great intellect. It was in 781 that he met Charles at Parma and was invited to become head of the palace school; and he remained in this position until 796 when, upon his own request, he was allowed to retire to a monastery, St. Martin's of Tours, as abbot.

In the first years of his reign Charles followed in the steps of Pepin and Charles Martel, his father and his grandfather. He supported the successors of Boniface in their efforts to Christianize the people and to extend the sway of the Roman church. He introduced the Benedictine Rule into the monasteries, and the semimonastic collegiate system of Chrodegang of Metz into the cathedrals. The bishops, who were made the main supports of his government, were given a certain control over the monasteries. Beginning in 773, Charles made some military expeditions into Italy and visited Rome. He was astonished at the remains of Roman buildings and art which spoke to him of the glory of the ancient city and awakened in him the desire to emulate the ancient civilization. His returning armies brought back across the Alps columns, mosaics, and other works of art. He built Frankish churches in imitation of those he had seen at Rome and at Ravenna, and he engaged Italian scholars to act as teachers of the Frankish clergy.

Charles turned his palace into a school, with the English Alcuin as its head. The princes and princesses of his own family and the sons of the nobility were given instruction in the liberal arts, and the king, in the intervals of his campaigns, attempted to set them a studious example. Grammar and rhetoric were studied, and efforts were made to cultivate a classical style. Charles was especially interested in astronomy, and in Greek, on account of its diplomatic importance in the relations of the western with the eastern empire. Alcuin could teach him such knowledge of astronomy as the times afforded but he knew no Greek; and Paul the Deacon who had studied Greek was not able to teach him very much of that language. It was not possible for the busy ruler of a realm which covered what is now included in France, Germany, Switzerland, Belgium,

Holland, most of Italy, and parts of Czecho-Slovakia, to spend much time in study.

Soon after Alcuin came to the court the king took occasion to instruct the clergy on matters of education. The scholar was probably responsible for the form and not the matter of the famous capitulary of 786, "On the cultivation of letters." The royal author said: Churchmen write incorrectly. What if their understanding of the Bible is equally defective? Therefore, let them study literature, including rhetoric, for the Bible contains many figures of speech. Let men willing and able to teach be selected to set up schools. This is the task of all bishops and abbots and is laid upon their consciences as a solemn duty to God and His church.

Also, soon after Alcuin came to the court, the king had him make correct copies of all the books of the Old and New Testaments and then gave command that all copies of the Bible should be corrected to correspond to Alcuin's model. Many missals and service books were so corrupt that they could not be properly emended. This gave Charles the opportunity to change to the Roman liturgy, which he doubtless intended to do in any case, and he supplied all cathedrals and abbeys with the new service books and ordered that correct copies should be made for them.

As soon as Charlemagne was assured that the higher clergy favored his efforts to improve education he made more stringent regulations. He directed the Council of Aachen (789) to include education within the scope of its deliberations; and the Council passed the decree that every convent and cathedral must establish schools in which boys were to be taught the Psalter, singing, the computus, and grammar. Priests had to pass a literary examination and those who could not meet the standard were deposed. All who were preparing for the clerical calling were instructed upon a regular plan. The newly erected Saxon bishoprics were assigned chiefly to men who had been pupils of Alcuin. Charlemagne through his scouts or missi gave attention to the schools and had only gifted teachers appointed. The Abbey of St. Martin's of Tours, under Alcuin after 796, became a school for the preparation of teachers and higher churchmen. The cathedral school of Metz was another of the great schools of the kingdom. Charlemagne supplied it with teachers from Rome, who were masters of all the liberal arts and who were especially noted for their skill in the teaching of music.

Even the children of the common people came within the scope of Charlemagne's endeavor. In spite of some opposition the monastery gates were opened to admit into the convent schools many children who were not intended for the monastic life. The same result was proposed in some rescripts of Charlemagne issued about 801. Finally, the great emperor caught a fleeting vision of universal education and compulsory attendance

at schools. It was only a glimpse and came about in this way. Charles discovered and revived the old decree of the synod of Vaison held (529) almost three centuries earlier. This decree ordered that all pastors, "as is the very salutary custom all over Italy," should receive young persons into their parish houses to teach them singing and reading and the commands of God. Charles ordered that all priests were, without charge, to maintain schools in villages and parish houses and were not to refuse any who came to them for instruction in letters. It was further ordered that "no one should henceforth dare to administer baptism to anyone who was unable to repeat the Creed and Lord's Prayer"; and severe penalties were prescribed for those who would not learn these formularies in the Latin tongue. It soon became evident that such laws were unenforceable in that age; but the strict duty was still imposed upon parents that they were to "send their sons to school whether to the cloister or to the parish priest so that they should rightly learn the Catholic faith and the Lord's prayer and should also be able to teach them to others at home."

The new system of education, wherein the church performed pre-eminent service, was to some extent the achievement of Charlemagne and Alcuin. Charles, as we know, ruled by his personal influence, and after his death the empire rapidly disintegrated; but his influence upon education never wholly disappeared. In the next century the English king, Alfred the Great (849-901), displayed an interest very similar to that of Charlemagne in the better education of the clergy. He even encouraged the cultivation of the vernacular language and caused translations to be made of Pope Gregory's *Pastoral Care* and Boethius' *Consolations of Philosophy*. Beginning in the eighth century the Northmen devastated and recolonized large parts of Britain and France; but by the end of the tenth century they had become civilized and the "intellectual depression" which followed the fall of Rome had been overcome.

By conquering and colonizing, Alexander the Great had spread the language and learning of Greece so widely in the Eastern world that he has been called the Apostle of the Greeks. Alexandria became a second Athens. In the early Christian centuries, Greek philosophy deeply influenced Christian thought. The catechumenal and catechetical schools were established to teach Christian doctrine and to erect a defense against philosophical attack. In defending itself, Christian theology absorbed much of Neo-Platonic thought.

A similar union was formed in the school curriculum of the West. This curriculum was composed of the remains of Greek, Hebrew, and Roman ideas and learning. It was the first task of the Middle Ages to make this synthesis; and this was accomplished under the auspices of the church and her schools. In the period of political decline, barbarian invasion, and civil disorder, the church preserved what it could use. Much of ancient culture had already disappeared from

the West; and of what remained, much was neglected. The spirit of investigation and criticism, the sense of history, and the hope of progress were almost entirely absent. Learning, embodied in outlines, summaries, and selections, was merely preserved.

The monastic and cathedral schools taught the Seven Liberal Arts, philosophy, and theology. In the scriptoria, books were copied and new ones written. Libraries, though never large, gradually increased in size. Charlemagne drew to his court learned men from several parts of his empire and attempted to stimulate the clergy to increased scholastic activity. He even hoped to spread some slight degree of learning among the laity. This example of state interest in education was not to be followed until much later. In the next century the great English king, Alfred, exhibited a similar concern for education, although on a smaller stage. But the period of educational quiescence was now over, and in the next period the Middle Ages became much more active and progressive.

QUESTIONS

1. Was the medieval period, in its educational development, a coherent historical unit or did it include divergent trends?
2. Show that the Middle Ages attempted a synthesis of Greek, Roman, and Judean-Christian knowledge and ideas. Was this union inevitable or might it have been avoided, and if so, with what results?
3. Why did the Christian teachers in spite of their opposition to pagan literature after all use it in their schools? And how did they justify its use?
4. How did the Roman civil organization affect the organization of the Christian church? How did this affect the schools?
5. Why did the schoolbooks of the Middle Ages tend to become formal and abstract summaries?
6. Why did Western monasticism develop only after the great persecutions came to an end?
7. Why did the monasteries carry on a great variety of economic activities; and why did they also foster reading, schools, the manufacture of books, singing, and other arts?
8. Outline the virtues and the defects of the monastic schools. Were the reasons for their defects at all comparable to those which characterized early modern common schools in rural sections?
9. Why were books expensive in the Middle Ages?
10. From the account of Eginhard or Einhard (see bibliography), write a paper on the character and personality of Charlemagne.
11. Why did Charlemagne draw his educational advisers from Italy and England rather than from his own Frankland?
12. In what respects do Charlemagne's efforts mark an advance upon the education of preceding centuries? How did his efforts differ from those of the Roman emperors? Was this an example of genuine state activity in education?
13. From J. M. Clark's history of *The Abbey of St. Gall* write an account of the intellectual and musical activities of that monastery. Were all or most monasteries as enlightened as St. Gall?

FOR FURTHER READING AND STUDY

Education in the Middle Ages was closely connected with the medieval church, and a background of church history is desirable. Although we have no space to list the major works, a course of reading in that field is to be recommended to those who have access to a good library. Equally, or more, important is reading in the general history of the Middle Ages. Two one-volume books that may be recommended are Carl Stephenson's *Medieval History, Europe from the Fourth to the Sixteenth Century* (New York, Harper and Brothers, 1935, 797 pp.) and Francis J. Tschan, Grimm, and Squires on *Western Civilization. The Decline of Rome to 1660* (Philadelphia, J. B. Lippincott Company, 1942, 783 and xciii pp.). Many of the books in the following list will be useful for the next chapter also.

- Abelson, Paul, *The Seven Liberal Arts*, New York, Teachers College, Columbia University, 1906, 150 pp.
- Adams, George Burton, *Civilization during the Middle Ages*, New York, Charles Scribner's Sons, 1913, 463 pp. First published in 1894, but still useful.
- Clark, James Midgeley, *The Abbey of St. Gall as a Center of Literature and Art*, Cambridge, University Press, 1926, 322 pp.
- Church, R. W., *Saint Anselm*, London, Macmillan & Company, Ltd., 1884, 303 pp.
- Deansley, Margaret, *A History of the Medieval Church, 590-1500*, London, Methuen & Co., Ltd., 1938, second edition, 284 pp.
- Eginhard (Einhard), *Life of Charlemagne*. Translated from the text of *Monumenta Germaniae* by Samuel Epes Turner, Cincinnati, American Book Company, 1883, 83 pp.
- Gasquet, F. A., Cardinal, *English Monastic Life*, London, Methuen & Co., Ltd., 1919, fifth edition, 326 pp. Excellent on the life and material arrangements of monasteries.
- Glover, Terrot R., *Life and Letters in the Fourth Century*, New York, G. E. Stechert & Company, 1924, 398 pp. First published in 1901.
- Halliday, William Reginald, *Greek and Roman Folklore*, New York, Longmans, Green and Company, 1927, 154 pp. (Our Debt to Greece and Rome Series.) Useful on medieval traditions derived from the ancients.
- Hannah, Ian C., *Christian Monasticism, A Great Force in History*, New York, The Macmillan Company, 1925, 270 pp.
- Labriolle, Pierre de, *History and Literature of Latin Christianity from Tertullian to Boethius*. Translated by Herbert Wilson, London, Kegan Paul, Trench, Trübner & Co., 1929, 555 pp.
- Laistner, M. L. W., *Thought and Letters in Western Europe A.D. 500 to 900*, London, Methuen & Co., 1931, 354 pp.
- Mullinger, J. Bass, *The Schools of Charles the Great and the Restoration of Education in the Ninth Century*, London, Longmans, Green and Company, 1877, 193 pp.
- O'Connor, The Very Rev. J. B., *Monasticism and Civilization*, New York, P. J. Kennedy and Sons, 1921, 253 pp. Deals with monastic libraries.

- Pope, R. Martin, *An Introduction to Early Church History*, London, Macmillan & Company, Ltd., 1918, 163 pp.
- Rand, Edward K., *Founders of the Middle Ages*, Cambridge, Harvard University Press, 1928, 365 pp.
- Sanford, Eva M., Translator, *On the Government of God*, by Salvian, New York, Columbia University Press, 1930, 241 pp. Fifth century document giving views of taxation, games, manners, and morals, of Romans and barbarians.
- Singer, Charles, *From Magic to Science. Essays on the Scientific Twilight*, New York, Boni and Laveright, 1928, 253 pp.
- Specht, Franz Anton, *Geschichte des Unterrichtswesens in Deutschland . . . bis zur Mitte des dreizehnten Jahrhunderts*, Stuttgart, J. B. Cotta, 1885, 441 pp.
- Taylor, Henry Osborn, *The Medieval Mind: A History of Thought and Emotion in the Middle Ages*, New York, The Macmillan Company, 1927, 2 vols.
- Wishart, Alfred Wesley, *A Short History of Monks and Monasteries*, Trenton, N. J., Albert Brandt, 1902, 462 pp. Anti-Catholic bias.
- Workman, Herbert B., *The Evolution of the Monastic Ideal*, London, Charles H. Kelly, 1913, 368 pp.

5 FROM MONASTIC SCHOOLS TO UNIVERSITIES

THE ELEVENTH CENTURY MARKS THE TURNING POINT IN medieval history. The previous losses, the long-accumulated deficits on the balance sheet of knowledge, culture, and welfare were overcome between the eleventh century and the end of the Middle Ages and there were positive gains sufficient to make the period from 1100 to 1500 one of Europe's great periods of progress. To be sure the people of that age were not able to realize all their ideals, and some of their greatest accomplishments led to new problems of health and morals, religion and politics, problems which had not troubled their ancestors. Economic dislocation, corruption in the church, a depressed and poverty-stricken working class, new diseases and devastating plagues were some of these ills. The educational advances included an increase in the number of schools and the wider extension of learning, especially in the cities; new and better books and methods; the beginning of instruction in the vernacular languages, which led, in modern times, to the common school; and most striking, perhaps most important, the creation of the medieval universities.

The most important factors in this progress were the growth of commerce and the rise of cities; new improvements in the crafts, including the art of building the great cathedrals; the establishment of stronger governments; the crusades and the rise of chivalry; the extraordinary effects of the recovery of the ancient learning from the Mohammedans; the development of scholastic logic, philosophy, and theology; and in the fourteenth century the renaissance of secular art, literature, and learning. We shall devote the present chapter and the following one to these subjects; but we must begin with a period of destruction.

1. DECLINE AFTER CHARLEMAGNE

The great achievements that distinguished the later centuries of the Middle Ages did not grow directly out of the Carolingian period. At

least two centuries of feudalism, invasions, civil disorder, and religious decline followed the close of Charlemagne's reign. His successors were not exceptionally weak but they were not able to lead and dominate as Charlemagne had done. Many monasteries were pillaged by the Vikings, as the Scandinavian invaders were called, and cities and towns were laid waste. There were armed clashes on three frontiers, north, south, and east, and a revolt in Italy. In two decades the Vikings plundered the valleys of the Rhine, the Seine, and the Loire and raided the Mediterranean coasts. In many places they remained as permanent settlers, and thence came the Norman kingdoms of Sicily and of Normandy in France. The extent to which they penetrated into the country and the importance of the cities they destroyed show how weak the central government had become. Since each locality had to provide for its own defense, local interests and local chieftains became stronger, on their own ground at least, than the king. In other words, the feudal system which the great Carolingian rulers had held in check came to prevail. And yet the Normans, like the modern Scandinavians, were easily assimilated by the people whom they had conquered. They accepted the Christian religion, developed the Norman-French speech, and became leaders in their new home.

Meanwhile the Moslems held control of Spain and of the whole western Mediterranean sea, including the islands of Sicily, Corsica, and Sardinia. They raided the coasts of Italy and France. Their pirates plundered the shipping of the Italian cities and controlled the leading ports. They burned the church of St. Peter at Rome and they sacked the mother monastery of the Benedictines at Monte Cassino. It was not until 1095 that Genoa and Pisa, combining their fleets, recovered control of their sea routes, which had the most direct influence upon the prosperity of those cities and upon the support they were able to give to the crusades.

Other enemies attacked the tottering empire of Charlemagne by land. In the ninth century the Magyars, driven up the Danube by the pressure of Asiatic tribes, united with the Avars, who had settled in those regions long before. Moving west, they broke through the defenses of the empire and invaded the plains of northern Italy and southern Germany. They even reached into Saxony and into eastern France. By attacks from all directions from without, and the spread of feudal conditions within, the empire of Charlemagne was destroyed, and the ground was thereby prepared for the rise of modern nation-states. East of the Rhine the first step was taken in 918 when Henry, the Saxon, was elected king; and in France a similar occasion presented itself when Hugh Capet attained the throne in 987. The rise of nation-states is significant in the history of education, for ultimately, but not yet for many centuries, they were to become the chief educators of their citizens.

2. MOSLEM LEARNING

Signs of the coming renewal of Western learning can be seen in numerous places from the eighth century onward. Even without stimulation from abroad, Europe would have developed a civilization not wholly different from the one which actually came to be. It would have taken much longer, discovery and creation would not have followed the paths which we find in the historical record, and some features, the crusades, for example, would have been missing altogether. This internal development was, however, stimulated by contributions from ancient Greece, from eastern Christianity, and from the Arabs.

As mediators and carriers of borrowed culture the Arabs were more effective than any other people with whom medieval Europe came into contact; but they were also more than carriers and mediators. Although they were not freely creative on the grand scale of ancient Greece, they yet made many contributions in agriculture, the arts and sciences, medicine, and philosophy. The Mohammedan religion, which developed in Arabia in the seventh century, set these people upon a career of conquest. Arabia was quickly unified, Syria fell after a single battle, Persia offered only weak resistance; and when the East had submitted the armies turned westward.

Their amazing conquest laid at the feet of the caliphs a vast domain stretching from eastern Persia across the Fertile Crescent and equally fertile Nile to the Pyrenees in the west. In all these conquests, however, they never met a first-class power. The world which the Arabs conquered was a decrepit world, divided against itself, and everywhere ready to break into pieces and to accept new alignments. Nor were they able to build a lasting and unified empire. Their political unity began to dissolve the moment their soldiers stopped marching.

Not political but religious unity and the wide extension of the Arabic tongue were the permanent results of these conquests. Although, as in Christianity, there are many sects in Islam, its pretensions have been well sustained. Spain is the only large country from which a firmly planted Islam has ever been uprooted. The real supremacy of the Arabs in the Middle Ages was religious, scientific, and commercial, and their great educational service was the transmission of learning from the slumbering East to the awakening West. Arabic became the universal language of learning and culture in large areas of three continents. The science and the philosophy of Greece and the East were taken up into this new cultural speech, carried to the West, translated into Latin, and placed before the scholars of Christian Europe. How this came about and what its effects were is the subject of our present inquiry.

3. SOURCES OF MOSLEM LEARNING

The main body of the knowledge which the Arabs were to carry to Europe was ancient Greek knowledge, preserved in the Greek language; but the early Arab conquerors were semibarbarian Bedouins. From the time when they came into the light of history down to Mohammed (c. 570-632) the peoples of the interior of Arabia were wild and predatory tribesmen. They were of Semitic stock, belonging to the same division of the human family as the Hebrews. They lived in tents and moved from pasture to pasture with their herds of camels.

Nature in the Arabian deserts has been so sparing of her gifts to man that the Arabs were usually hungry and ready to prey upon caravans or upon their neighbors, especially those in the fixed settlements. These desert warriors would not stoop to work in regular occupations such as agriculture or industry, for work was considered fit only for slaves. They practiced only one fine art, that of poetry. In the southwestern part of Arabia, near the Gulf of Aden, there were settlements; farther north there were cities of which Mecca and Medina were the chief; and frankincense and spices from Arabia itself, pearls from the Persian Gulf, and rich luxurious products from India were carried along the coast of the Red Sea to Egypt, Palestine, and even to distant Rome. The young Mohammed engaged successfully in this caravan trade. But of learning and letters the desert Arabs had none and the trading Arabs very little. Those were the days which the Moslems themselves consider the times of ignorance, although they refer mainly to their ignorance of the faith, before Mohammed. It is thought that the Prophet was unable to read or write.

When the Arabs came into the outside world all this was changed. They quickly became literate and many of them became learned. Aroused to a burning zeal for their new spiritual values, driven also by the pangs of physical hunger, and, when the campaigns succeeded, led by ambition and the well-established Arabian desire for loot, they conquered the whole extent of the Fertile Crescent, invested Alexandria in 642, swept across the ancient Roman province of Africa to the Atlantic, and in 711 crossed the thirteen-mile-wide straits of Gibraltar into Spain, which became one of their fairest provinces. They marched as conquerors but they were in turn taken captive by the civilizations which they found. No other people which began at so low a level of civilization was raised so quickly to such a high plane of culture as these Semitic tribesmen. They accomplished as much in two centuries as the Germanic barbarians in six and the ancient invaders of Greece in eight or ten. The chief instruments were Indo-Persian, Syrian, and Hellenic books, teachers, and schools at such centers as An-

tioch, Edessa, Harran, Jundi-Shapur, and the Islamic capitals, Damascus and Bagdad.

The history of Moslem scholarship as far as it concerned the medieval West comprises two main parts. The first task of the Arabs was to acquire the ancient learning of the Hindus, Persians, and Greeks. To this learning they gradually added their own achievements. The second act of the drama was played in the twelfth century in Moslem Spain and consisted again of translation, this time from Arabic into Latin. Much of this knowledge had once been available in the West, but some was lost in Roman times and still more during the Dark Ages. The return of this forgotten knowledge through translations from the Arabic into Latin had the most stimulating effect upon the mind of the West and was one of the main influences in the rise of the medieval universities.

4. BYZANTIUM AND PERSIA

The books and learning which made the translations possible were preserved in the Byzantine empire, which has been called the rearguard of European civilization. The capital city of Constantinople, founded by Constantine the Great in A.D. 330, was the center of the empire, some of whose outposts of learning have already been mentioned. Constantine set up new schools and endowed old ones. Theodosius also provided for the higher learning in literature and philosophy, both Greek and Latin. Libanius, the great sophist of the fourth century, taught at Antioch. Gaza on the southeastern edge of the great sea was long famous for its schools of rhetoric; and Alexandria and Athens continued to produce valuable work in geometry in the fourth and fifth centuries of our era. The law schools of the Byzantine empire were famous, especially those of Berytus, so that, when Justinian in the sixth century desired to make a definite code of the Roman law, there was no want of competent legal scholars to carry out the imperial project.

Alexandria had once been the rival of Athens as a center of learning. The great library, variously estimated from four to seven hundred thousand rolls, was founded early in the third century before Christ; and it was supplemented by a smaller one of perhaps two hundred thousand rolls in the Serapeum. There was also the great Museum with its provision for the work and residence of a body of scholars who received public support. There is a mistaken tradition that all this was destroyed by the Moslems. The fact is that both of the libraries had been destroyed long before Mohammed, the greater and older of the two when Alexandria was besieged by Caesar in 48 B.C. and the smaller one about A.D. 450. Orosius, the historian, mourned over the ruins a generation after the latter date.

The Greek learning of Byzantium was frequently translated not directly into Arabic but in a roundabout way through Syriac, Hebrew, Persian, and finally into Arabic. Many of the scholars who made the translations were Christians with heretical tendencies, who were driven toward the East by persecution. The two most important groups were the Nestorians and the Monophysites, each dividing from the orthodox faith and from each other on the question of the nature of Christ. Both the Nestorians and the Monophysites originated in the fifth century and spread far and wide in the East before the Moslem conquests in the eighth century. Persia had an important scientific center in the medical school of Jundi-Shapur, near the Persian Gulf. The name, Jundi-Shapur, is variously spelled and means "Conquered by Shapur," one of a dynasty of kings. It was also noted for the study of astronomy, or astrology, which was connected with medicine through the belief that the stars influenced human health and destiny. The school reached its highest point in the sixth century. Damascus, where al-Khwarizmi worked, and other cities of western Asia were equally famous for their schools.

5. TRANSLATION INTO ARABIC

One of the greatest translators into Arabic was Hunayn-ibn-Ishaq (809-873), a physician and noted investigator. Hunayn, known in Latin as Joannitius, was a Nestorian who worked at Jundi-Shapur and later served as physician to the caliph at Bagdad. He was an admirable character as well as a scholar. One story tells that when Hunayn refused to poison a political enemy of the ruler he was threatened with death. Commanded to reveal the reason for his refusal, he replied: "Two things: my religion and my profession. My religion decrees that we should do good even to our enemies; and my profession is instituted for the benefit of humanity. Besides," he added, referring to the oath of Hippocrates, "every physician is under oath never to give anyone a deadly potion." He was released and continued to hold the favor of the caliph.

Hunayn's position as medical librarian at Bagdad led to his work as a translator. He was careful not only to give a true rendering but also to secure the most accurate manuscripts. Some of the treatises of Hippocrates and nearly all those of Galen, some dialogues of Plato, and several works of Aristotle were translated into Arabic under Hunayn. The Greek text of Galen's seven books on anatomy has been lost, but the contents have been preserved in Hunayn's Arabic version.

Other schools of translators at Bagdad and elsewhere flourished from the eighth to the twelfth centuries. Most of the Greek works on geography, astronomy, mathematics, and medicine were translated into the Arabic

tongue; and many new works were written. Among the leaders were al-Khwarizmi, a mathematician, al-Razes and ibn-Sina, commonly known as Avicenna, medical writers, Omar Khayyám, a poet and mathematician, and the philosopher ibn-Rushd, known to us as Averroes.

6. FROM ARABIC INTO LATIN

Spain was quickly conquered by the Moslems, but they found the country hard to pacify and to govern. But during periods of vigorous government, Moslem Spain was prosperous and her cities rivaled in wealth, luxury, and pleasure the cities of the East. Cordova, the capital, competed with Bagdad and Constantinople in the arts of civilized life and far excelled Paris and every other city north of the Pyrenees. In the ninth and tenth centuries, Cordova had a half-million inhabitants for whom it provided well-lighted, paved streets, public baths, and a bridge across the Guadalquivir to connect the city with its southern suburbs. The royal palace was built of Numidian marble, and the grand mosque attracted pilgrims from the whole of Moslem Spain. Seville, Valencia, and Granada were other famous cities, but the greatest center of scholarship was Toledo, famed also for its manufacture of "Toledo blades," which vied for pre-eminence with the swords of Damascus. Intellectual activity and particularly the work of translation continued at Toledo even after the city was retaken by the Christians in 1085. Archbishop Raymond was, in the twelfth century, the founder and patron of a vigorous school of translators which flourished for a long time. Arabic continued in Toledo to be the official language in law and business for two hundred years after the Christian conquest. Many Christians whose faith and practice were assimilated to those of Islam lived in a separate quarter of the city, regularly spoke two languages, Arabic and a form of Low Latin which was on the way to become Spanish, and were known as Mozarabs. The Latin language was written with Arabic letters, Spanish kings used Arabic characters on their coins, and even the ritual of the Catholic church showed Mozarabic influences. Similar assimilation in the direction of Islam was shown by the Jews of Spain, of whom many adopted the language, dress, and manners, and a very few the faith, of the Arabs. Cordova, the capital of Moslem Spain, was also the seat of a flourishing Talmudic school and a center of Jewish culture.

The recovery of ancient science and philosophy in the twelfth and thirteenth centuries was an important cause of the medical renaissance. The Moslems were not interested in Homer, Herodotus, and the Greek dramatists. Their religion did not permit the development of painting and sculpture. Like the Romans, they were not able to acquire the whole range of Hellenic culture. If they had been, the renaissance of classical

literature in Italy might have occurred in the thirteenth century along with the revival of logic and the development of scholasticism. The medieval renaissance revived instead ancient logic, philosophy, and science, not pure literature, and this revival stemmed from the translation into Latin of the numerous Arabic texts of Greek and Hindu authors that had been written in the East during the three or four preceding centuries. This era of translation divides the educational history of the Middle Ages into two clearly marked periods. The earlier one we have already described. In that, to quote Renan's *Averroes*, the human mind had to satisfy its curiosity with the meager fragments of Roman school education which such writers as Martianus Capella, Bede, and Isidore had preserved in their dry outlines. But in the later period, after 1100, the West learned far more of Greek science than Rome had been willing or able to acquire. The whole body of Greek and Arabic medicine, Greek and Arabic mathematics, astronomy, and alchemy, all of Aristotle, and numerous works from India, Syria, and Persia were by 1300 available to Latin Europe in its own language. The recovery of this learning promoted the educational renaissance of the Middle Ages.

Sicily was, next to Spain, the most important gateway through which the ancient learning was brought back to Europe. Sicily was of particular importance because it was ruled by the Arabs for two centuries before the Normans conquered it and continued to hold a large Moslem population afterwards.

But more important than location and sources is the eagerness of European scholars for learning. It was not the Arabs who translated their works into Latin; it was the Latins of Christian Europe who translated from the Arabic into the language of the West. Europe was awakening, and European scholars such as Adelhard of Bath went in search of the manuscripts, acquired the necessary knowledge of languages and subject matter, and carried through the translations. Before the twelfth century monastic and cathedral libraries had only the usual Latin books. By 1300 the translators had done their work and much of the ancient knowledge was again available.

With the dozen or more first-line European translators we can deal only briefly. Adelhard of Bath translated Euclid's *Elements* and the astronomical tables of al-Khwarizmi and wrote original works on "natural questions," a science miscellany that was popular in the Middle Ages, and on astronomy and the use of the astrolabe. Another mathematical translator was the Italian, Plato of Tivoli, who lived in Barcelona for a dozen years after 1134. Leonardo Fibonacci was not a translator but an original writer on mathematics and the first to explain the Hindu numerals to Christian Europe. This he did in 1202 in his *Liber Abaci*, the book on the abacus.

He was the author of other, more advanced, mathematical works. Robert of Chester translated the algebra of al-Khwarizmi and revised Adelhard's version of the astronomical tables of the same author. Robert, in 1143, completed the Latin version of the Koran requested by Peter the Venerable.

How the scientific and mathematical minds of the later twelfth century were affected by the discovery of Arabic science is seen in the *Philosophia* of Daniel of Morley. He found the scholastics of Paris filled with "a pretentious ignorance" and hastened to Toledo "to hear the world's great masters." There he became a pupil of Gerard of Cremona, one of the most prolific and learned translators of that time. Gerard had received a thorough Latin education in Italy, studied Arabic in Spain where he found and translated Ptolemy's *Almagest*. Meanwhile, in Sicily and northern Italy, scholars had begun again to translate directly from Greek into Latin. By the close of the thirteenth century, Greek science and the Aristotelian philosophy were available in their entirety in the Christian schools and universities of Europe.

7. THE RECOVERY OF ARISTOTLE

Aristotle was to scholasticism, to theology, and to advanced studies in the liberal arts what Galen was to medicine and the Code of Justinian to law. When we take into account the wide range of the subjects that Aristotle treated and the persistence of his influence down to our own day we see that he was the most important single author in the medieval renaissance. The material for that revival was at hand, when Aristotle's works became available and not before.

The introduction of Aristotle into Western education occurred between 1100 and 1300. Abelard knew only parts of two of his works on logic. About 1128, James of Venice translated from Greek into Latin four other logical works by Aristotle, the *Topics*, the *Prior* and *Posterior Analytics*, and another dealing with logical fallacies. The whole group came to be called the "New Logic," new in the sense of having been previously unknown to Latin readers. Nearly at the same time the old version of Boethius again came into circulation. At least two new translations from the Arabic were also made. All of these versions of the logical works came into use in the twelfth century.

The other writings of Aristotle appeared in the West a little later. Several of the shorter works dealing with natural history were introduced before 1200. Most of these, like his works on logic, came by one of two independent routes, direct from the Greek or by way of the Arabic. The works dealing with social and ethical questions, the *Politics*, the *Ethics*, the *Eco-*

nomies, and the *Rhetoric*, were translated in the thirteenth century. By 1275 the whole of Aristotle was again available, and most of his works became required reading in the universities, but before that came about, the scholarship of the West had passed through an acute crisis.

The crisis which Aristotle precipitated in the schools arose because of the necessity for an accommodation between his teaching and that of the Christian church. The same difficulty arose in Islam and in Judaism, because all three religions taught that the world, including the matter of which it is composed, was created by God, while Aristotle taught the eternity of matter. There were other points of disagreement, but this was the central one. The men who dealt most incisively with this contradiction were ibn-Rushd (Averroes) in Islam, Moses Maimon in Judaism, and Thomas Aquinas in Christendom. Ibn-Rushd wrote his commentaries on what later educators have called the spiral plan. There were three turns in his spiral. The first was an elementary summary for beginners and that was followed by an intermediate and thus, finally, by a full text and definitive interpretation. These three commentaries corresponded to three levels of education just as, to compare great things with small, a primary, intermediate, and advanced school geography series does today. We shall see that Comenius came back to this idea but it was already old when ibn-Rushd used it, for it was a common plan in the higher schools of Islam.

Aristotle's own doctrines were considered dangerous, but when they appeared in the dress of a Moslem philosopher, Averroes, they were alarming. The church tried to suppress both at once. In 1210 the teaching of Aristotle was forbidden at Paris by the provincial council on threat of excommunication. In 1215 the study of the logic was permitted but that of the *Metaphysics* was again forbidden together with everything that smacked of Averroes and Averroism. At this point the great scholastic doctors undertook the task of harmonizing the teachings of the Greek philosopher and the church. Albert the Great and, especially, Thomas Aquinas were so successful in reconciling reason with revelation that Aristotle was considered a safe author. By 1275 the whole of Aristotle, interpreted in a Christian sense, was admitted to the university course.

8. THE CRUSADES

The first crusade was preached by a monk of Cluny who had become Pope Urban II. The church had long wished to check the constant civil warfare which feudal conditions had brought about in Europe. The monks of Cluny, with the support of powerful laymen, had moved for the restoration of law and order, the Peace of God as it was called. All who committed outrages, attacked noncombatants, or violated sacred places were

solemnly excommunicated. The Peace of God was supplemented by the Truce of God which banned all fighting from Wednesday evening to the following Monday morning. Four days of peace each week had a salutary effect upon practical affairs. Pope Urban was in Clermont in the heart of his native France seeking a renewal of the Truce of God when, in November 1095, by an eloquent and moving address, he launched the first crusade. "Dieu le veut"—God Wills It! shouted the people in unison. So says the legend. The ensuing crusade was altogether real.

The crusades were made possible by the new unity of Christendom under the leadership of the papacy, and since they were in one sense military pilgrimages to the holiest of Christian shrines, they were an expression of the rising spirit of asceticism. All through the Middle Ages, pilgrimages were a favored form of penance, and in preaching the first crusade Pope Urban felt himself justified in promising immediate entrance into paradise to any crusader who died repenting of his sins.

The time was favorable for such campaigns. The West enjoyed comparative peace. The invasions by Northmen and Hungarians were over. National and commercial interests and activities were still in their early beginnings. The spirit of adventure and knight errantry was strong. There were few competing claims upon the rising power of the great barons and kings. The religious attitude of the time, we have noted, was ascetic. The papacy was powerful. Numerous smaller crusades had already been undertaken with the blessing of the church in Spain, in northern Africa, and in aid of the Eastern emperor. Under all these conditions, the enthusiasm for the great adventure of 1096 can be readily understood.

This first crusade was followed by others. There were eight major and numerous smaller ones during the next two centuries. We shall deal only with the influence of these military pilgrimages upon civilization and education. They were not wholly or mainly "holy wars" nor were the crusaders wholly disinterested and chivalrous men risking their lives in a noble cause. The purposes and the results were certainly in part economic. In the second place, the crusaders were less civilized than those whom they sought to conquer. The capture of Jerusalem in 1099 led immediately to a wholesale massacre of Moslem and Jewish inhabitants. In Europe the crusades were the occasions for widespread outbreaks of anti-Jewish persecutions and pogroms. The crusaders suffered greatly because they knew nothing or almost nothing of hygiene, and they seem to have been responsible for the increase of leprosy in Europe. On the other hand the crusades had a direct influence in the improvement of surgery and the increase of hospitals.

Many of the lords who went on crusade never returned to claim their fiefs. Meanwhile the serfs escaped to neighboring towns, and they and their

descendants helped to swell the numbers of the growing middle class of free workmen and artisans. The removal of the barons enabled the kings to strengthen their power. The crusaders who came back returned with a wider knowledge of the world and its civilizations. They had learned of new and desirable commodities in the luxurious East and of the trade routes. Commerce was stimulated. More and more the later crusaders traveled by sea from Italy over the Mediterranean. They depended upon the Italian cities to furnish transport, supplies, ships, and sailors. Italy became the purveyor to the crusading armies, and a great impulse to her developing commerce ensued. The crusades were an important factor in preparation for the Italian Renaissance. Chivalry developed from the crusading movement; and in chivalry there arose an aristocratic educational system which was to have far-reaching influences.

9. CHIVALRIC EDUCATION

The institution of chivalry, based on a feudal society, received its greatest impetus during the period of the crusades. It continued in full vigor for centuries, however, and exercised an influence upon education which lasted into modern times. The word itself is derived from the French *cheval*, a horse, whence *chevalier*, which as a military term meant cavalryman or knight. For the origin of much of the elaborate etiquette and many of the terms of chivalry one must also go to the French. But the institution was by no means purely French. Some of its basic customs originated among the early Germans. Many of its moral ideas such as loyalty, truthfulness, respect for womanhood, and knightly honor were developed under the influence of Christianity. But, although chivalry may have moderated the customs and manners of a rude age, it can hardly be held that the institution was ever truly Christian. It was too aristocratic and recognized no obligations to the common man. It set a moral and social gulf between the noblemen who lived in the castle and those who labored on the manor, the artisans in the city, and even the priest who ministered in the church. Chivalry was based upon a caste system.

In the early feudal age the young nobleman was not expected to have a literary education. His profession was that of a mounted warrior. At seven the boy became a page and learned to serve at table, to carve the roast or fowl, and to hunt. Heraldry and chess were not omitted. At fourteen he became a squire and had to serve as valet to his knight, to help him dress, to put on his armor, and to groom his horse. Fourteen years of service as page and squire prepared the young man of twenty-one for knighthood. After a night of vigil in the church, communion was administered. The candidate was invested with his arms and armor, he knelt at the altar, the

sword was laid across his shoulder in the adoubement, and he rose a full-fledged knight.

Chivalric education was not a uniform and static system but one which exhibited considerable adaptability and the power to survive under different conditions. In later times it included many refinements which would have been scorned in ruder days, music both vocal and instrumental, dancing, the art of love as well as of war, and even some of the sciences, especially the mathematical and military ones. Chaucer's squire is an illustration. He could ride the war horse but he was equally adept at singing and composing songs, playing on the flute, and dancing. In Chaucer's description his skill in drawing gets as much emphasis as his ability to unhorse an antagonist. Chivalric tendencies did not die out with chivalry. Schemes for the education of the prince and later of the gentleman and the lady showed traces of chivalric influence. Writers like Castiglione and Sir Thomas Elyot were deeply affected by chivalric ideals. The French academies, the knightly academies of Germany, the writings of Montaigne, Locke, and many others down to the eighteenth century were influenced by the practices of the medieval knight. Basedow's scheme (1774) of physical education was one result of his experience as a teacher in a knightly academy. As feudalism was at war with commerce, the knight with the burgher, so the chivalric education was opposed to the practical and democratic education of modern life.

10. MEDIEVAL TOWNS AND TOWN LIFE

All through Western history educational progress has been dependent upon industry, commerce, and urban prosperity. There are many more illustrations of this rule than exceptions to it. Today in the United States the great cities are also great educational centers. In Europe, likewise, the great capitals have long been famous for their universities and schools. So it was in the ancient world whose great schools and famous teachers were to be found in Athens, Antioch, and Alexandria, rather than in the provinces. The history of the Middle Ages proves the same truth. With the decline of urban life in the West, education also declined; and when cities rose again on the old sites or in new locations, schools became larger, more numerous, and better. The fact does not need any elaborate explanation. Schools must have students, funds, and cooperation, and all of these are more readily found in urban than in rural regions.

The growth of cathedral towns had an important influence upon education. The decline of commerce and of a commercial population increased the relative importance of the bishops. The clerical population of a cathedral town included not only the cathedral clergy with numerous secretaries

and legal advisers but also priests, teachers, and students in the schools as well as the monks of any local monasteries. Most towns had markets on one or more days a week; many had an annual fair for the sale of cloth, armor, weapons, and other products. Of such a town and the surrounding communities which formed his diocese, the bishop was both the religious and the civil head. He administered the law, repaired the streets and the walls, and organized the defense in case of attack.

Other towns in the ninth and tenth centuries grew up around fortified places. This is the meaning of the word borough or burg. The borough did not at first have any commercial importance, but eventually commercial quarters developed under the walls of many boroughs. These quarters frequently had to be walled in for security, and in such a community we have the beginning of a modern city. Often neither the episcopal town nor the fortified borough was a genuine city, for they frequently had no middle class population, no corporate privileges, and no commercial or industrial importance.

Industry and commerce have been the usual bases of urban development, and these are intimately related to each other. Industry requires supplies of raw materials, industrial skill, and markets, while commerce finds the markets, brings the raw materials, disposes of the manufactured goods, and supplies the needs of the workers. Both industry and commerce are aided by compact populations, political stability, just laws, good roads, or by adequate shipping and an open sea. Money and credit, weights and measures, ready methods of calculation, and adequate business records are other essentials. These at once suggest the importance of education, and it is fair to say that education, in a broad sense, is fundamental to the whole economic structure.

The Italian cities were ready to take advantage of the new knowledge and new markets that developed from the crusades. As a direct result, Venice and Pisa developed their shipping and employed their sailors to transport goods across the great sea. Venice became the most important link between the East and the West. She kept up her connection with Constantinople and prospered from the business of provisioning that great city.

From Venice the produce of the Levant and Egypt were carried northward by several routes. An eastern route reached Ratisbon and used the Danube to Vienna; a western crossed Switzerland to the Rhine and then followed the Seine to Paris; but the Brenner Pass gave the most convenient access to the north. This last track led to Innsbruck whence the goods were carried in many directions, to the Flemish coast, to Scandinavia, and to all parts of Germany. Trade routes were determined by natural conditions, mountain passes and river valleys. At strategic points, cities arose.

Venice catered especially to the German trade in later centuries and as early as 1228 a German chamber of commerce was to be found on the Rialto. Young German businessmen were sent to Italy to study business methods; and they always learned a great deal besides. Italian exchanges and business and banking houses were likewise established in the northern towns when these towns developed. But the cities of the north remained culturally undeveloped for a considerable time. Their trade was in raw materials and their people were engaged in harder labor and exposed to greater risks. On the other hand, southern German towns like Nuremberg and Augsburg were more easily affected by Italian art and ideas.

Pisa first became prominent through an immigration of Sardinians who fled from the Moslems in the eighth century. Genoa was its commercial rival, but the two towns adjusted their differences for a combined and successful attack upon Mohammedan sea power. Both towns also took large part in the crusades. In the course of the thirteenth century Pisa succumbed to Genoan competition and arms and eventually it became merely the port for the trade of Florence.

Florence, which was to become the capital of the Italian Renaissance, became wealthy through its manufactures of wool and silk and the work of its artists and artisans, especially the goldsmiths. The power of the Florentine state was in the hands of a succession of noble families although in form its government was democratic. Its powerful guilds gave political training to the "free" Florentines. Before and during the Renaissance it was the most turbulent but also the wealthiest city of Tuscany and the industrial center of all Italy.

Commerce not only followed the natural trade routes but it demanded their improvement. Roads were repaired, and bridges replaced fords. Boats and barges were provided for river transport. To protect their packs and cargoes, merchants traveled in armed bands. Church and state each tried to do its share in making the roads and the seas safer. The church excommunicated pirates and highwaymen and invoked its Truce of God especially for the protection of travelers, pilgrims, and merchants. Treaties between nations began to include safe-conduct clauses for traders. England's Magna Charta guaranteed legal protection to them; and many cities, eager for the success of their annual fairs or their regular trade, granted them privileges and legal safeguards. Commercial needs led to the establishment of a postal service between important Italian towns in the twelfth century. Ancient Rome had established a postal service, but it was used for official business only. The twelfth-century commercial post transmitted private letters as well. By its means a letter could be carried at the rate of fifty miles or more a day. In the north postal service did not develop until the thirteenth century. Public transport service for heavy merchandise was

provided. The coinage of gold, which had to be abandoned in Carolingian times because there was no gold in Gaul nor any use for gold coins in a feudal society, was now resumed. The gold florin, so called because coined in Florence, marks the high noon of the commercial renaissance. With the increasing complexity of commercial relations, more elaborate records became necessary, and so it came about that the Italians invented double-entry bookkeeping sometime in the twelfth century. As late as the eighteenth century American schoolmasters advertised in the newspapers lessons in bookkeeping "after the Italian method of double-entry." About the same time (1202), also, the Hindu-Arabic numerals were imported into Latin Europe, more precisely into Italy whence they followed the trade routes northward and, although it took four centuries, were adopted by the whole commercial world.

In northern Europe the Netherlands began as early as the time of Charlemagne to engage in maritime commerce. This was due not only to the great rivers, such as the Rhine and the Scheldt, but also to the closing of the Mediterranean by the Moslems. But these early commercial beginnings were destroyed by the Northmen, whose invasion of the country was made easier by the same wide and deep estuaries which had favored foreign trade. By the tenth century the Northmen had become settlers, themselves engaged in peaceful pursuits instead of destruction. They now became the link to join the economic resources of the Arab and the Byzantine empires with those of the north. It was the Scandinavian shipping that aroused the Flanders coast to economic activity. The existence, since Roman times, of an extensive woolen industry increased the commercial importance of the region. Its cloths and Frisian cloaks were famous throughout the Middle Ages. Bruges was the Venice of the north, the first city in the Netherlands to develop an overseas commerce. The same forces that raised Bruges to commercial importance developed Ghent, Ypres, and other cities of that region. The trade routes which converged upon the Low Countries came down the Rhine and followed the south shores of the Baltic. Through Lübeck passed the Russian trade which brought to the west the "wealth of Ormus and of Ind," and that city was the pivot of the Baltic Hanseatic or merchant league. By the tenth and eleventh centuries the commercial area of the Roman empire had been greatly extended, for not only the Mediterranean but also the Baltic and the North Seas were now commercial highways connecting the busy and populous towns that enlivened their shores. Back of this trading and transportation activity were the great wholesale merchants who handled wool and woolen cloths, silks, furs, spices, and other products. As the transactions increased some of the great merchants also became bankers supplying capital and credit to the smaller houses and the retail trade.

11. THE GILDS

The merchants and craftsmen of the towns were usually organized into guilds or associations with statutes, officers, and economic, and often also political, rights. They were established for the mutual protection of the members and the advancement of their interests. Some guilds were of the nature of labor unions and cooperative societies combined, while the greater guilds more nearly resembled manufacturers' associations and chambers of commerce. The guilds are of importance in social and educational history because they carried on the medieval system of vocational education and gave the middle class an opportunity for education in liberty and democratic processes.

Gilds varied in scope. They might be simple, comprising only those engaged in a single trade or craft; or complex, including several occupations. They varied in organization, some being democratic, others oligarchic or capitalistic in structure. Furthermore, democratic gilds not infrequently passed into the control of a special class which exploited the less privileged members. Gilds which treated their employes as little better than serfs were not infrequent. Evidently the word gild stands for diverse social phenomena. Most students hear only of the small-industry gilds, the friendly personal relations between apprentice and teacher-employer, and the room at the top for every apprentice to become a master workman. The facts were often otherwise.

Craftsmen under the gild system passed through three stages. Just as in chivalry one became first a page, then a squire, and finally a knight, so under the gilds the young worker became an apprentice, a journeyman, and, finally, a master workman. But the sequence was not inevitable. The gilds were or tended to become monopolies in their special crafts and often controlled the number of workers in each class. The number of apprentices which any master might take was limited by the gild. The usual number was two or three, but sons of the master were not counted and new apprentices might be taken on before the term of those about to finish was quite completed. This was to prevent the difficulty that a master might be left at any one time with only inexperienced helpers. Some apprentices were never allowed to become master workmen, while the son of a master workman might be promoted to his father's rank without passing through the usual course of training.

Children were apprenticed at an early age. The period of apprenticeship was from two to ten years long, but seven years was perhaps the most frequent term. Both the age at entrance and the length of the training varied from trade to trade and in relation to other circumstances. Only

master workmen of good character were allowed to take apprentices. At the beginning there was usually a short period of probation for the young worker. This was followed by a contract, called an indenture, between the master and the father of the boy. The master agreed to teach his trade, to supply food, clothes, and lodging, and to stand in *loco parentis* to the apprentice. In the usual small crafts the boy became a member of the master's household and ate at the family table. The apprentice in his turn covenanted to be obedient and dutiful, not to marry during the term of his training, to keep the secrets of the craft, and to work faithfully and conduct himself honorably. The indenture was executed before witnesses by a notary and sealed with the proper oaths. Abuses such as running away from the master or excessive cruelty to the boy were to be laid before the guild officers. When the apprenticeship was completed the master was required to give the young man a certificate of the fact. He could then continue to work for his old master for wages or go to seek other employment, whence he was then called a journeyman.

The guilds were the channels of vocational education; and apprenticeship was the means for providing an adequate succession of skilled workers. The workshop was the technical school of the Middle Ages. At a time when all the common articles of daily use were made by hand, skill in a craft gave the journeyman the means to earn an adequate living, establish a family, perform his civic duties, and attain a satisfying life among his equals. Literary education was not included in apprenticeship; but late medieval and modern indentures provided that the boy must be given the opportunity to learn the rudiments of reading, writing, and arithmetic. These were acquired in evening sessions in private or town schools.

Gilds also established schools. These were of two kinds, literary, that is, Latin secondary schools, and vocational or apprenticeship schools. The former of these are commonly known as the medieval gild schools. They were numerous. Of thirty-three English gilds which A. F. Leach studied, twenty-eight at some time maintained gild schools. Such schools belonged to the prevailing type of Latin grammar schools. The primary purpose in establishing them was philanthropic. It must be repeated, for students constantly misunderstand the facts, that these did not teach trades but gave a literary education to boys who later might go to a university and prepare for a profession. So a gild of Worcester, England, "time out of mind," maintained a school which at the Reformation had "above the number of a hundred scholars." Famous London gild schools were the Stationers School, the Mercers School, and, one of the most distinguished of all, the Merchant Taylors School.

Gilds also, especially in Germany, established continuation apprenticeship schools. Apprenticeship in the workshop was replaced by regular

trade teaching in schools of different types. In the city of Munich the associations of artisans maintained numerous technical schools until about 1900 when Kerschenshteiner incorporated them into the public school system. So in Berlin the merchants' association maintained six continuation schools for the commercial education of apprentices, and the tailors' association had a school taught by master tailors, cutters, and designers from the large tailoring establishments.

One other highly important but incidental educational function of the guilds resulted from the opportunities they gave for the political education of their members. Especially in the free towns or communes the guilds joined forces with all the discontented classes against the rich and powerful. Each guild formed a corporation whose members, as in a little republic, deliberated and voted and received a practical civic education. There were struggles between groups within a guild, between two or more guilds, and between the guilds and the city itself. The medieval guilds frequently were units for the holding of elections, for the supply of soldiers, and for taxation purposes. A major question always concerned the apportionment of the privileges and responsibilities of these separate republics. Under such conditions oratorical ability, political skill, and leadership were developed.

Unfortunately in the large commercial cities the greater guilds developed into oligarchies. In the small crafts the social distances between master, journeyman, and apprentice were not great. But in the great commercial and industrial associations the inequalities became staggering. The masters, bound together to support their interests, were rich and powerful capitalists separated from their workers by an impassable gulf. The labor difficulties of modern automobile or mining industries merely repeat, hardly in a more intense degree, the struggles that developed in the woolen industry in the Middle Ages. Florence, where the *Arte di Calimala* controlled the woolen industry, furnishes a striking example of such struggles between the haves and the have-nots. The *Arte di Calimala* had twenty or thirty thousand "members," but of these the great mass had no powers whatever. Even the guilds of the Middle Ages had learned the device of farming out their work to unorganized and unorganizable domestic laborers, compelled by circumstances to work for mere subsistence under sweatshop conditions. With the profits from such industry the monopolistic guilds then endowed schools and hospitals for those who belonged to or would graduate into the upper classes.

The guilds were established for the benefit of their members but they also rendered many public services. Some of these were educational, some economic, and others benevolent. With the rise of powerful national states the guilds came under state regulation, and with the increasing specialization and mechanization of industry apprenticeship declined in importance.

12. NEW SCHOOLS IN THE CITIES

The urban schools which arose in the later Middle Ages were of greater importance than the people could realize at that time. They were of two types, both closely connected with the secular life of the city and less closely with the church than the cathedral and monastic school. There we find the first slight beginnings of a secularism which was to supplant the church as the chief educational agency. This change required hundreds of years, but from 1300 if not before it was under way.

One type of new school was the city or gild Latin school; and the second was the city or private writing and reckoning school. The city Latin school was controlled, not by churchmen but by the civil authorities, usually the town council, and its students were the sons of merchants and other well-to-do burghers. No extended description of the city Latin school is needed because, except in personnel and administration, it differed little from the Latin schools of the church.

Documents from Cologne show the existence of city Latin schools in 1234. Breslau in 1267 asked leave to build a city school so placed that the children would not need to cross unsafe bridges. Hamburg by appeal to the Pope against the local clergy secured permission to establish a city school, a proposal which the cathedral authorities had fought for eight years.

The struggle at Hamburg was not unusual. Local church authorities opposed the city schools as an invasion of their privileges. The cathedral might be willing to have city schools teach the elements of Latin and some writing and arithmetic but would reserve to itself the right to teach the more advanced subjects such as rhetoric. Although there was no question of faith or morals involved in this warfare, the church used its usual weapon, excommunication; the towns retaliated with court actions; and when a conflict was finally adjusted the city had often won at least a part of its contention. Such cases were sometimes important enough to be carried to the head of the church. In such instances, the Pope was likely to decide in favor of the town and its schools and against the interests of the local clergy. When the patricians or the town council established Latin schools they also usually conferred upon the teachers a monopoly of secondary education. The fight here was chiefly against private elementary schools whose teachers taught Latin to the disadvantage of the recognized teachers.

The writing school was even freer from church control. It taught reading, writing, business arithmetic, and bookkeeping to the sons of artisans and businessmen and sometimes to their daughters. Private, secular schools

of the *ars dictaminis*, the art of writing legal papers, existed in the large towns of Italy as early as the tenth century. In the early centuries of our period, business letters and records were still in Latin, but in the thirteenth century, with the development of the vernacular languages, these commercial schools turned to the common language as their medium. The three chief adjectives which are to be applied to the city schools of the later Middle Ages are, therefore, public, middle class, and practical; but we must add that they only gradually tended to acquire these qualities. In the thirteenth century beginnings were made, but only beginnings.

Many of the private schools were commercial and vernacular schools of handwriting and arithmetic. Others were still more elementary and taught only the alphabet, spelling, and reading. It is to these types that we must look for the beginnings of the elementary or common schools. The church was but little interested in them because they seemed to be vocational and related to business rather than to religion. Their early history is obscure and must always remain so because they seemed too insignificant for careful record.

The vernacular schools, although they multiplied rapidly, were often humble enough. They were often called "reading and writing" or "writing and reckoning" schools. That many of them existed in England, Scotland, Germany, and elsewhere long before the Reformation is clear. They grew rapidly about 1350 or 1400, which is about a century later than the beginnings of the city Latin schools. They became almost general by 1500; a Mainz leaflet of 1498 asserted that "everybody now wants to read and write." It has been estimated that the city of Nuremberg in the sixteenth century had about fifty reckoning, that is, arithmetic, masters; and they formed a gild. This is an early example of a teachers' association.

Most of our information about these early vernacular schools comes from records of disputes and lawsuits. Lübeck had several German schools about 1400, and in 1418 a formal agreement was drawn up between the city and the scholasticus. The latter consented to the maintenance of four German writing schools on condition that one-third of the fees received should be turned over to the cathedral. A similar solution was reached at Brunswick (1420). It was agreed that the writing masters should confine themselves to the common language, teaching no Latin at all. That the contract had to be reaffirmed later in the century is evidence that it was not always observed.

On the other hand, Latin schools often gave elementary instruction. This was true of the burg schools of Scotland which go back to the thirteenth or even the twelfth century, as in Stirling and Perth. In Amsterdam the city Latin schools had to fight against encroachment by the writing masters. Hamburg, about 1400, limited the number and attendance of

common schools to protect the interests of the Latin schools. But all this legislation was the effort to sweep out the ocean with a broom. At the end of another century (1500) the Hamburg scholasticus complained that "new schools are almost daily opened by old women and other persons." This was changing the words but not the spirit of the Mainz leaflet quoted above; and it shows again that many unauthorized schools were being opened everywhere, in homes, tailors' shops, and other rooms where indoor occupations could be combined with elementary teaching. The poor were seeking education for their children. The closing Middle Ages saw vigorous competition in school-founding.

The writing and reckoning schools taught arithmetic and bookkeeping and were the chief agencies to introduce the Hindu-Arabic numerals and the new methods of computation into the West. The rise of commerce and cities both changed and increased the educational demands of the times. Bookkeeping, commercial arithmetic, the need for commercial and manorial records, the recording of city and guild minutes and accounts all gave employment to a growing class of men who made their living as writers, accountants, and secretaries. Private correspondence also increased, and men made a business of writing letters for those who could not write their own. Setting up their desks in the open at a busy corner, they plied their trade. These were often teachers, who earned an extra penny in this way. A vernacular literature was growing up rapidly and with it grew the general desire to learn to read. The wealthy and influential people of the towns desired a regular education in Latin and the Seven Liberal Arts for their sons. The common people demanded vernacular schooling and a ready acquaintance with figures and the pen. With the growth of the cities, both classes of schools multiplied. Meanwhile knowledge also advanced rapidly. In the last three centuries of the Middle Ages the population of Europe may have doubled but the available knowledge multiplied many times—knowledge of the sciences and medicine, of law, philosophy, and theology. It was this great increase in knowledge which led to the foundation of the universities. The schools, which had served the West as the main carriers of its rather meager learning, now became inadequate.

13. THE RISE OF UNIVERSITIES

The universities arose in cities. For purely physical as well as intellectual reasons an institution which enrolled hundreds or thousands of students could exist in the larger centers only. They arose when the spirit of inquiry, the need for a trained professional class, and a great accumulation of ancient knowledge developed. The earliest arose in Bologna, where legal studies had been carried on for several hundred years, and in Paris, where

theological questions had begun to occupy some of the best minds. In Bologna, at the crossroads of northern Italy, Irnerius and other famed teachers of the Roman law had been interpreting the civil rights of the Italian cities. These claims for freedom from domination by the empire were based upon ancient Roman charters. In Paris the cathedral school of Notre Dame had become a leading center of higher education through the teaching and controversies of William of Champeaux (1070-1121), Abelard (1079-1142), and other theological scholars. Abelard's *Sic et Non* was a new form of textbook. It dealt with a large number of theological questions. After each one, he presented arguments on both sides, drawn from the Bible and the Church Fathers, without stating any conclusions. He declared that it was his aim to stimulate thinking, "for through doubt we are led to inquire, and through inquiry we discover truth." Other writers soon prepared other textbooks which employed this disputational method. The pursuit of learning directly implied freedom to think and to report the results obtained by thinking; and the struggle for this academic freedom from external control—which still continues and will continue—was another of the main causes of the rise of organized bodies of independent scholars, that is, of universities.

The universities of the Middle Ages, like those of the present, were incorporated schools and what distinguished them from other lower or advanced schools was the fact of legal incorporation. They were corporate bodies of teachers and students, equipped with a charter, seal, bylaws, and officers. Other schools were directly controlled by church, city, guild, or private founder but the universities were themselves legal persons, free from external control. Being in the same world, they were, naturally, not free from external influences, and both the church and the empire as well as kings, bishops, and the Dominican and Franciscan Orders found ways of shaping their policies and of using them for other purposes than the pursuit and promulgation of knowledge and truth.

The earliest universities developed in the twelfth century. The Universities of Bologna, Paris, and Oxford are examples. These all grew out of previously existing schools, Paris from the cathedral school of Notre Dame, Oxford from a similar institution, and Bologna from law schools which, as noted, had existed many years before the university was chartered. These, the oldest universities, have had a fairly continuous history of more than seven centuries. Salerno, a city below Naples that was noted for its medicinal waters, attracted students and teachers of medicine early, but as these were never incorporated, Salerno cannot be counted as a university. Later it became the seat of the medical faculty of the University of Naples. The other three are often called the mother universities because they provided the models for later incorporations. Bologna,

which was controlled mainly by the students, was imitated in the southern countries. The charter of Paris, which placed the governing power in the faculties, was most influential in the north. The earliest universities were shaped by circumstances and evolved gradually; but most of the later ones were founded outright and equipped with a charter from the beginning.

About eighty universities were open by 1500. The movement spread outward by a process of diffusion and imitation from the original centers. Only Bologna, Paris, and Oxford can be definitely assigned to the twelfth century, but Montpellier in France and Cambridge in England belong to the early thirteenth if not to the twelfth. Besides these two, the thirteenth century saw the establishment of one or several in Italy, in Spain, and in southern France. The movement, therefore, spread first in the Mediterranean area. In the fourteenth century it advanced to new locations in these countries and also into Germany, where the first university was established at Prague in 1347. This was a partly Czech foundation; but as the Czechs did not get along well with the Germans they later separated. The university of Vienna was opened in 1365, the Polish university of Cracow in 1364, and the one at Buda in Hungary in 1389. Altogether about twenty new universities were opened in the fourteenth century, the largest numbers in Italy and France. By 1400, Italy was fairly well supplied with universities, but in France four or five new ones were added in the fifteenth century. In that century, also, the movement advanced into Scotland. And so it continued until, if we include the new foundations of the twentieth century, it had extended around the world. Thus the Middle Ages created an educational institution which, though greatly modified and even transformed, is considered more useful and necessary today than ever before.

The university charters gave grants of privileges or rights to the institutions and their students. The most important of the rights granted to the universities was the right of self-government. This permitted them to control their own organization and their members. Thereby students came to be subject to the law of the university instead of the law of the land. The universities had the right to arrest offenders, to try them in the university court, and to discipline them by fine or imprisonment; and the city authorities were required to hand students over to the university for these purposes. The students were eager to claim this right because they were frequently foreigners in the university city, and expected more considerate treatment from their own group than from municipal courts. In the heated state of public opinion, which resulted from the "town and gown" riots of a turbulent age, this was a matter of importance.

Universities also had the right to suspend lectures and to go on strike

against the city when the rents or prices of food were raised or when students were assaulted or even, as sometimes happened, killed by citizens. Since a university was a valuable financial asset to a city a strike, called *cessatio*, often secured redress of grievances; but if it did not, the university as a whole or in part might move to another city. Many of the newer universities were founded as a result of such a migration. Since the early universities owned no real estate, being conducted in rented buildings, and had no university library or laboratories, it was easy for them to move. They often resorted to the stoppage of the lectures and the threat to migrate for apparently trivial reasons.

In the third place, the universities had the right to examine and to license their own professors and to control their own degrees. This implied the right to determine the studies and exercises which should qualify students for degrees, one of the most essential functions of these institutions.

The faculties of Arts, Law, Medicine, and Theology formed the full complement of the usual medieval university. Some universities lacked one or more of these and some had two law faculties, one for canon and another for civil law. After the Reformation some also had two theological faculties, one Protestant and the other Catholic. The universities were, therefore, professional schools although the Arts faculty in earlier centuries gave preparatory work, mainly in logic but also in others of the Seven Liberal Arts. The dean was the head of each faculty and the rector was the head of the university. The rector's term of office was usually for one year only, and he had no such extensive powers as we associate with the office of university president in the United States. In some universities his main duty was to deliver an inaugural address, in others, to preside at convocations or meetings of a university senate, and in still others he exercised some administrative functions. The students were organized into "nations" according to the regions from which they had come. At the head of each nation stood an elected councillor who represented the interests of this body and its members.

All instruction, all exercises, and all books were in Latin. The main exercises were of three kinds: the lecture, the repetition, and the disputation. Lectures themselves were of two kinds: formal and cursory. In the earlier period of university development the university hall was unheated and had practically no furniture, although the professor perhaps always had a dais and reading desk or lectern, for lecture meant reading. The students sat on bundles of straw and, in writing with their quill pens, they supported their parchments on their knees.

In the formal lecture, the professor read the text slowly and the students took it down word for word. In southern universities the lecturer was

fined for reading too fast or too slow or for skipping passages. After a passage had been completed the professor added his comments and interpretation. When books became accessible students could buy the basic texts or rent them from university stationers. Thereafter, the formal lecture was outlawed, and the cursory lecture was substituted. This consisted of a free rendering and interpretation of the text. But throughout the medieval period, university instruction was based upon authors such as Galen in medicine or the *Institutes of Justinian* in civil law. The systematic presentation of a subject or field of study developed only in modern times.

The repetition consisted of a rehearsal and discussion of the matter of a lecture and was usually led by advanced students, to each of whom was assigned a small group of students each equipped with lecture notes. The disputation was a debate between two or more students pitted against each other and presided over by a professor. They argued a stated thesis or point of doctrine; and the disputation was used both as a practice and teaching exercise and as an examination for the coveted degree.

There were three stages in the progress toward a degree. The student was at first a freshman, although this is a modern term, or *bejaunus*, meaning yellow-beak, then he became a *baccalaureus*, and finally a master or doctor. The last two terms were equivalent, and each means qualified to teach. The English universities later took over the term master while the continental universities appropriated the term doctor. To this was added the name of the faculty in which the degree was taken as in the phrase Doctor of Medicine, or of Law. The arts faculty was eventually placed upon an equality with the others and in Germany and elsewhere the name was changed to philosophy, whence the degree of Doctor of Philosophy. Still later the term philosophy in this connection came to include all the non-professional subjects so that now we have Doctors of Philosophy who have specialized in various fields such as mathematics, history, or languages. In the medieval universities, most of the students did not remain to complete the six to nine years of study which were required before the doctor's or master's degree could be attained.

The students at first lived in rented rooms and later in halls, often under university supervision. When instructors were assigned to such a student-hall, when an organization was effected, and when some of the elementary instruction was also given in the hall, this constituent part of a university was called a college. The English universities of Oxford and Cambridge have retained this collegiate form and exhibit most fully the medieval arrangement. These English colleges bear something of the same relation to their controlling university as the states of the Union bear to the government of the United States. They have their own personnel, organization, and internal regulations and are constituent parts of their university.

The medieval students were young, often arriving at the age of twelve or thirteen; hence the need for regulation and supervision. They were foreigners in a strange land. Their rooms were without warmth, the streets were unlighted, and the police were not numerous. There were no or few legitimate means of amusement. From the records one gathers that life in the medieval university was often irregular and sometimes incredibly violent.

The university was the outcome of a genuinely popular movement. The institutions arose and grew because they met a popular demand. They were fostered by pope, emperor, and kings partly because these powers expected to benefit from their work; but they prospered because the people felt the need for them and because they offered opportunities that had not been available before. The numbers of their students were not as large as the medieval chroniclers report. Perhaps no medieval university, not even Paris or Bologna, ever had more than six thousand students at any time, and the smaller institutions counted their numbers in hundreds rather than thousands.

The instruction was bookish and authoritarian. We can no longer fully realize or understand the subservience of the human mind which was shown in the Middle Ages to the authority of Aristotle, or Galen, or the theological textbooks of the university. Lectures were not contributions to knowledge or systematic treatments of a field, but rather commentaries upon a book and explanations of its statements, or efforts to harmonize conflicting views. In the disputation such opposing positions were set over against each other and some originality was demanded; but even in this exercise there was often an accepted conclusion which, it was assumed, would emerge triumphantly from the debate. But although orthodoxy in medicine, law, and theology was favored, heresy gradually increased as the arguments were sharpened and new knowledge accumulated until in the sixteenth century Peter Ramus at the University of Paris argued that all that Aristotle had taught is false.

The universities prepared learned men for the professions, stimulated writing in the great fields of human interest and need, developed a growing band of scholars, and aided in the appeal from force to reason. They prepared many of the early leaders of the Renaissance. The Studium or university took its place beside those other great medieval institutions, the Imperium or empire and the Sacerdotium or church, and helped to bring into being the modern world.

After Charlemagne, the Viking invasions disturbed the civilization of Europe, piracy interfered with seaborne commerce, and the feudal system reached its height. The Moslems developed an advanced civilization in Spain and Sicily.

They brought Greek, Hindu, and Persian learning to the West, and much of this was translated and incorporated into the Latin culture. Scientific, medical, and mathematical knowledge and the works of Aristotle became available and were given an important place in university instruction. The logical and scientific writings of Aristotle profoundly influenced Christian thought after 1300. The effect of Aristotle upon theology in the later Middle Ages formed an interesting parallel with the influence of the Neo-Platonists upon Christian thought in the third and fourth centuries.

The crusades served to unite the West, increased its knowledge of the world, developed means of transport, and made Europe aware of a civilization that was more advanced than its own. When barons were long absent or failed to return, their serfs and villeins often escaped to the cities and joined the growing class of urban freemen. Each of these changes tended to stimulate commerce. Commerce promoted the growth of cities, capital, markets, and travel. A money economy displaced the old system of barter. Schools increased in numbers and became more diversified in nature. Bookkeeping became a new and important subject of study; and its pursuit implied skill in commercial arithmetic and handwriting. In the later centuries of the Middle Ages many schools taught the vernacular languages.

Chivalric education developed ideals of knightly honor, service, skill, and courtesy, and out of this grew the education of the prince, diplomat, and gentleman. Upper class education was long influenced by its aims and practice.

The guilds controlled apprenticeship, set standards of workmanship, conducted vocational education, and aided their members in sickness and old age. They also established many Latin schools. Before the end of the Middle Ages, capitalism and the new system of domestic manufacture had begun to break the guild monopoly of skilled industry.

Universities began to form themselves in the twelfth century. They were independent corporations of students and professors devoted to higher learning. Their most important privileges were the right of self-government, and of granting their degrees and selecting their teachers without outside interference. They educated new classes of professional servants of state and church, increased learning, multiplied books, and served as arbiters in disputed matters of government and religion. Their inability to free themselves from dependence upon authors, who were regarded as authorities, was their chief intellectual defect. Before the end of the Middle Ages, other authors, the literary masters of Greece and Rome, were again recovered in the Italian Renaissance. Gradually the full complement of ancient culture was restored; but, as we shall see in the next chapter, this was not only an age of restoration but also a creative period.

QUESTIONS

1. Show how this period illustrates the dependence of education upon civil order and stability.
2. On a map of the Eastern hemisphere trace the present extent of Moslem civilization.
3. Compare the influence of Greek culture upon ancient Rome with that influence as it was spread by the Moslems in the Middle Ages. Consider extent, methods, and subject matter.

4. Why did the intellectual activity of the Moslems when they came face to face with ancient Greek culture take a turn so different from that of the Romans when they came into contact with the same materials?
5. The Moslem civilization of Spain reached its height in the ninth and tenth centuries but the Latin borrowing came later. Why?
6. Did any of the learning transmitted by the Moslems directly affect the lives of the common people? Consider also the broader topic, namely, the degree to which the learning of the Greeks, the Romans, the medieval schools affected the common people. Why?
7. How was the recovery of Aristotle's works on logic related to the systems of thought among the Moslems and the Christians?
8. How were the intellectual, religious, and administrative reforms of Cluny related to each other?
9. How did the crusades affect the intellectual and political condition of Europe?
10. How did chivalric education differ from that of the schools of the same period? Consider the aims of the people concerned, the means used, and other factors. Consider the statement that it was a form of "activity education."
11. Show that the growth of commerce developed a European in place of a Mediterranean civilization; and compare the influences upon education of the ancient cities and late medieval cities.
12. Compare apprenticeship with chivalric and school education. What was the nature of the gild schools?
13. Why were the local clergy less favorable than the Papacy to the extension of education in the cities?
14. Do you agree with the judgment that the university was the greatest educational achievement of the Middle Ages? Why, or why not?

FOR FURTHER READING AND STUDY

The monastic and cathedral schools remained and became more important in the later Middle Ages and to these the universities were added. The rise of universities in the twelfth century was made possible by the recovery of ancient learning and by the increase of commerce, cities, gilds, and wealth. The crusades were followed by the development of chivalry, which had a profound influence upon later education. Many of the following books will aid the student to understand the "renaissance of the twelfth century" and the following centuries which led to the Italian "revival of learning."

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6

THE RENAISSANCE
IN ITALY

WE SHALL BEGIN WITH THE MEANING OF THE WORD RENAISSANCE. Every age which, through the revival of an earlier culture, develops new life and creative activity forms a renaissance. The medical and physical sciences are today the centers of a great scientific renaissance; the whole western world after the French Revolution experienced a renaissance of liberalism, humanitarianism, and democracy; but, with those who wish to emphasize the continuity of human evolution, the word is out of favor. These students point out that the Middle Ages were not as dark, the transitions of history not as abrupt, and "the Renaissance" not as glorious as they have been painted; but yet the word has its uses and is not to be too lightly given up. And the desired continuity of history may be secured by recognizing the large number of renaissance periods, noting their interconnections, and tracing their causes. We shall, therefore, with C. H. Haskins, speak of the rapid progress after 1100 as "the twelfth-century renaissance," which continued through the thirteenth century; and shall consider the development of northern Europe after 1500 as the northern renaissance. Between these two occurred the Italian Renaissance of the fourteenth and fifteenth centuries with its recovery of classical humanism, which is our present topic.

The Italian Renaissance was more than the revival of ancient learning and the recovery of the ideal of liberal education. Intimately related to the revival of learning was the artistic revival and a great development of civil and political life. Indeed it was more than a revival for, like every true renaissance, it was a creative period. The artistic achievements between Giotto and Tintoretto were accomplished by many painters, sculptors, and architects, each great enough to mark an epoch. Their age was dominated by the ideals of the fine arts quite as much as our time is controlled by scientific concepts. Furniture and costume, war and religion, morality, and politics were all judged by artistic standards. Symonds said: "From the Pope upon St. Peter's chair to the clerks in the Florentine counting-house,

every Italian was a judge of art, and estimated all things in terms of their artistic qualities." But the wonder of their age is not their ability to judge and criticize but to produce. They solved difficult technical problems of perspective, coloring, and composition; but more than that, they had something of importance to say together with the genius to create an art-language capable of saying it effectively.

We owe to Italy also the fuller recovery of the two ancient literatures of Greece and Rome which is called the revival of learning; and that service to civilization was rendered in the fourteenth century, at the last possible moment because Constantinople, which had preserved the most important Greek manuscripts, was captured by the Turks in 1453. The Moslems of the Middle Ages had paid little attention to the literary and artistic work of Greece; and now, in the fourteenth century, the Italians were the only people immediately capable of understanding Greek poetry and philosophy. It was Italy in turn which roused the sleeping North. With the recovery of the classics we shall have to deal at some length, but we shall see that the recovery itself was a creative act. It was no mere physical discovery of dead books but a taking to heart and into the understanding of the thought and feelings of the ancients.

The period was marked not only by the recovery of old literatures but also the rise of a new one, the modern Italian. The first great modern classic was the epic of Dante. The prose and verse of Petrarch and Boccaccio as well as the development of the sonnet as a literary art form were further Italian contributions to the earliest great literature in a modern tongue.

The development of Italian literature was closely related to the growth of Italian political institutions. The unit was the city-state, recalling the similar organizations of ancient Greece. Each of these political entities was composed of several classes, the nobility, merchants, mercenary soldiers, and workingmen organized into powerful guilds. The population was torn with the strife and dissension of the classes; and between the several cities there existed competition and even hatred rather than cooperation. Each of these states, with their concentration of wealth, extensive public works, and oligarchical or democratic government, was able to reward its abler citizens with positions of honor, power, or wealth; and the intense civic development of the times is merely the other side of an equally intense individualism. The Italian city-state was a cause of the decline of those medieval institutions, the universal church, the empire, and feudalism; and a money economy was becoming general. One evidence of this latter change was the coinage of the states, the gold florin of the great financial center, Florence, being a prime example. Meanwhile the use of gunpowder, the mariner's compass, paper and printing, the march of

geographical discovery were other features of the Italian Renaissance. If the age must have a set beginning and ending we may take the birth of Petrarch in 1304 and the sack of Rome in 1527 as these dates. At the birth of Petrarch, Dante still had seventeen years to live; and in any case most of the period falls within the conventional period of the Middle Ages. When Charles V secured control of the peninsula (1527), the Renaissance in Italy was over, the Reformation in Germany was in full career, and Catholicism was preparing the Counter-Reformation.

1. CLASSICAL HUMANISM

The recovery of classical literature and the humanistic movement which together make up the "revival of learning" are, for the student of education, the most important phases of the Renaissance. Humanism combined the aims of self-realization and self-expression with the older ideal of a liberal education. Aristotle's concept of a liberal education as the culture of citizens, free men in a free state, again acquired the secular connotation that it had in Greek times; but also it was often given an individualistic, even an egoistic turn. As a reaction against medieval feeling, humanism stressed the interests of a worldly, civilized life in an earthly city in contrast with preparation for a world to come. On the other hand, humanism generally accepted Greek and even Christian ethics and was therefore opposed to all radical naturalism. But actually the philosophies of the Italian humanists were so divergent that no simple classification would do justice to all their views.

In education, humanism was the study of great human achievements and thoughts as these are preserved in the greatest writers. Such study is necessarily historical, for we can no longer interview Pericles or Plato and we can speak of them with assurance only if we know them as characters in their times. The works of man are of the most various kinds, but most of them are anonymous and can be studied only as they have affected the material world, tradition, or the written record. The humanists studied the record chiefly, although the beginnings of classical archaeology fall within the Italian Renaissance. Books, however, contain more than information; they offer inspiration and guidance also. As DeQuincey taught, there is a literature of knowledge but there is also the literature of power. It was the latter, the drama, epic, oratory, philosophy, in general the great authors who are notable for form and expression as well as content which formed the humanistic curriculum. The matters treated by these writers are chiefly human life and values; hence the term humanism is appropriate to such studies.

The values which were stressed most in the Italian Renaissance were

aesthetic, ethical, and political: the interest in beauty and the aesthetic experience; and the interest in conduct and political life. In both respects the Italians of the fourteenth century believed that they could learn from the ancients, and there were at that time no other literatures so rich in beauty, so freighted with meaning, and so competent to give guidance as the Greek and Roman. In addition, the Roman literature was the product of their own ancestors on their own soil, and it therefore appealed powerfully to their patriotic feeling. They gradually discovered, also, that the Roman writers had been inspired and taught by the Greeks and that they could be fully understood only by those who were acquainted with the Greek models.

Those studies are humanistic which present, analyze, and criticize human thought and conduct. History, literature, philosophy, and social anthropology are leading humanistic studies. The writings of the Greeks and Romans in these and cognate fields are sometimes called the ancient or classical humanities; and comparable writings, in modern tongues, may be called modern humanities. Whether ancient or modern, humanism emphasizes man, not God or nature but man, as a politically, ethically, and aesthetically free being. Human freedom is one of the postulates of humanism; and the Renaissance demand for individual freedom is of the essence of the new education. The humanist education of that age was not professional like that of the medieval universities. The humanists contrasted their own general, liberal, and preprofessional culture with all that was technical, narrowly practical, and vocational. This contrast is still accepted by many, who urge that a balanced education must give due attention both to the purposes of life and the means of living, both to the humanistic and the technical needs of the student.

2. THE LATIN LANGUAGE

At the Renaissance the Latin was still a living language, in constant use by the church, in the professions, and in the schools. Just because it had been in continuous use for many centuries it was no longer the Latin of the Romans. Quintilian, who lived until about A.D. 100, is sometimes called the last of the classical writers. In this long stretch of time the Christian church had introduced new ideas and a new vocabulary, and great changes had taken place even in the structure and the idioms of the language. Medieval Latin in itself may have been no worse than classical Latin but it was different. In one respect, the history of medieval Latin had been unfortunate; it frequently had to grow in a foreign soil. It developed largely among a non-Latin and a barbarous people who spoke Teutonic or Slavic dialects and who learned Latin only at school. Because they fre-

quently did not really know what the accepted Latin forms were the language was corrupted through the ignorance of its users.

The Italian humanists, having fallen in love with the works of the great Roman authors, especially Cicero, readily discovered the difference between contemporary and classical Latin. They hastily jumped to the conclusion that Ciceronian speech should be made the standard for their own day, and like schoolboys went about trying to find mistakes in the letters and books of the dignitaries of their time; and they found them. "Ignoramus! blockhead!" they shouted, just as though Europe had not changed since the time of Cicero. They set up an inappropriate language standard for literature and the schools; and it was, in part, their pedantic imitation that killed the Latin language. But its demise was hastened by the growth of the modern tongues which had been reduced to writing and gradually displaced the ancient even in books for scholars. Yet the Latin lived on for a long time. Secondary schools and universities were conducted in classical Latin, and Latin textbooks were used until about 1700, or even later; and the Catholic church, for some purposes, uses it today. Schools and universities, of course, still teach Latin and Greek, but they no longer generally use either as the language of instruction.

3. WHY THE RENAISSANCE BEGAN IN ITALY

The earlier view that the Italian Renaissance was a sudden upheaval and revolt against the Middle Ages is now discredited. It occurred in the later Middle Ages because the earlier had prepared the way for it. The Renaissance is a good example of historical continuity, although the people who lived at that time thought they were creating a fundamental break with tradition. Even in the Middle Ages, the idea of a revival or renaissance was common; but what men looked for was a religious revival. The monastic reformers, especially Francis of Assisi, are examples. With the religious hopes arose also visions of the rise of Italy and the reestablishment of the Roman empire. Dante, in his *de Monarchia*, following the argument of Thomas Aquinas, proposed a world empire. In 1347, Rienzi (1313-1354), the orator and tribune, believed himself to have reopened a new and glorious period of Roman supremacy. The papacy had deserted Rome for Avignon on the banks of the Rhone. Rienzi restored the republic, revived the self-government of the city, and invited all Italy to aid in establishing a united nation. This political scheme was based upon archaeology and the traditions and laws of antiquity. Rienzi failed tragically, but his ideas lived on and were adopted by Petrarch, the greatest writer then living. Ideas of a revival and rebirth were therefore not new; and certain features of the Renaissance can certainly be traced from the twelfth century on-

ward. Italy was the focal point. Because of her location, Italy had long been the bridge between the East and the West over which trade and travel passed in either direction. It was her location which had enabled Italy to control the whole Mediterranean area during imperial times. Because of this, and because Italy had been the seat of the Roman empire, it was practically inevitable that the revival of the ancient civilization should first take place there. There were the ancient sites and monuments, the names, the traditions of past grandeur, there the Italian language furnished access by easy stages to the Latin from which it was derived, there the Roman law was still a living institution. The humanists were the first classical archaeologists. The popes and princes of Italy were the first collectors of ancient sculptures. And the artists studied the antique for inspiration for their own creations. Insofar as the Renaissance was a Latin revival, it was clearly inevitable that it should begin in Italy. And until 1396 the revival was almost wholly Latin. Neither Petrarch nor Boccaccio knew much Greek, and Petrarch at least, just because he was one of the most highly cultivated men of his time, felt this as a serious defect. Again the revival took place in Italy because of her centers of wealth and taste and her active public and patriotic spirit. The private and public means for gratifying taste in art and learning were at hand. Wealthy individuals, cities, despots, and the church established libraries, galleries, and schools and maintained collectors, copyists, scholars, and teachers.

4. THE SPIRIT OF THE RENAISSANCE

The first modern man, a new psychological phenomenon, is often said to have appeared in the Renaissance. Instead of the humble and penitent member of a class or an order, we see a self-conscious and self-sufficient individual seeking power and fame through art, learning, war, and even crime. George Eliot in *Romola* depicts such a one in the head of the Bardi family, who demands an eternity of fame as a scholar and collector of books.

The humanists frequently lived by the patronage of the great, and they often reflected the egotism and arrogance which they caught from their sponsors. From their pedestals they looked down upon the vulgar, who knew not Cicero and who spoke only the lowly vernacular. Thus Petrarch said: "Who indeed could excite envy in me, who do not envy even Vergil?" and as for Dante, "our poet," who wrote in the common tongue of tavern keepers, weavers, and butchers, we must realize "how little the plaudits of the unschooled multitude weigh with scholars." It is for us today to realize how far such men were from any concept of popular education.

The man of the Renaissance was the all-sided man, *l'uomo universale*,

showing often the most extraordinary versatility. Dante was a publicist, theologian, philosopher, and poet. Leonardo da Vinci and Raphael had the widest interests and were skilled in the most various arts. Or consider Leon Battista Alberti (c. 1404-1472). He was the author of a famous work on education, *The Care of the Family*, was a noted gymnast, a scholar, author, musician, and an important art critic, but his forte was architecture in which he achieved real greatness. Only a little less variously gifted was Cellini (1500-1571), the author of a well-known autobiography which presents a picture, not only of himself, but of his times.

These, and the other great men of the time, were strongly individualistic; but this applied only to the great and those of the upper classes. The peasants and the workingmen were not yet free. The lower guilds were held in subjection. It was the ruleis, courtiers, condottiere, and the scholars and artists who freed themselves from tradition and exhibited *virtu*, that is, self assertion and personal independence. Good examples of this radical individualism are found in Machiavelli, the author of the *Prince*, in Cellini, who was so extreme that he was not typical, and, at the other end of the scale, the sensitive and refined Botticelli. As another caution against broad generalization on the men of the Renaissance, we may recall that the Middle Ages also were not without their individuals, for they produced Abelard. Yet we do not mean to withdraw the statement that individualism is a basic characteristic of the greater men of the fourteenth century. Further evidence is contributed by literature with its abundance of personal writing, autobiographies, memoirs, and letters.

The men of the Renaissance were notable letter writers. This was a type of literature, little cultivated in the Middle Ages. Petrarch and Erasmus are among the great letter writers of all time, and that is the reason why we know their characters so well. One has to keep in mind that many letters were written for publication; but, carefully handled, the personal correspondence of the period is a good measure of the new individualism. In letters and autobiographies the souls of these men are opened to the gaze of all who read.

Almost from the first of the revival of learning, men feared the return of paganism, a renewal of the old struggle between the ancient gods and Christianity. These fears were in some measure realized. Increasing attention was paid to Stoicism and especially to Seneca's *Morals*; but under cover of Stoicism, practice was often Epicurean. Bembo, who was an officer of the papal household, advised Sadoletto to omit from his studies the letters of St. Paul lest the barbarous Latin of the Vulgate should spoil his style. Even for the titles of the officers of the church, the classical style was employed: Thus the pope was designated *Pontifex Maximus* and the college of cardinals *Senatus Sacer*. These were not the diversions of out-

siders; churchmen themselves became humanists. One of the great events which assured the success of the new learning was the election (1447) of Pope Nicholas V (1397-1455). "On that day the new learning took possession of the Holy See, and Rome began to be considered the capital of the Renaissance." The most skeptical humanists and artists did not launch an open attack against a church which gave them employment or which might turn upon them and chain them to the stake; but veiled sarcasm and oblique attacks on the Christian faith and institutions were common. Poggio, Filelfo, and Valla used such tactics. Though indifferent or hostile to religion and the church, in all ceremonial matters they conformed. Macaulay has brilliantly vindicated Machiavelli's cynical and amoral political theory on the ground that in the *Prince* the virtues of a great mind shine through the corruptions of a degenerate age. This is to say that the virtues are those of the author and the vices those of his time! This picture again is not true of all humanists and not of many of the teachers. Vittorino was much concerned for the moral and religious education of his pupils as were Vergerius, Sadoletto, and others.

5. FRANCESCO PETRARCH

Petrarch was one of the first and greatest of the humanists. In his life and work he exemplified the eager search for manuscripts, the early interest in Greek, the passionate love of Cicero, and that literary temperament which led him and his contemporaries to lay too much emphasis upon words and mere eloquence. This is a matter of importance for education. The exaggerated attention to style and the constant effort to imitate the sounding periods of Cicero were defects, not only of Petrarch, but of the whole revival and its education. The schools came to put eloquence upon a par with intellect and good character and, in fact, it was too often accepted as a substitute for them.

Petrarch, a Florentine by nationality, was born at Arezzo in 1304 where his parents, "poor but honorable folk," were living in exile. His childhood was spent near Florence, at Pisa, and, from his ninth year, at Avignon where the pope had "long held the Church of Christ in shameful exile." In these words Petrarch revealed his loyalty to Rome. He regarded the Romans as his ancestors and the ancient empire as his country. In his brief autobiography, he told the story of his life to the age of forty-seven. He studied law at Montpellier and Bologna. What impressed him most in this study was the frequent reference to Roman antiquity. He described the transfer of his allegiance from the law to the classics. He returned home at the age of twenty-two, not as a lawyer but as a humanist. The Colonna family became his patrons and bestowed benefices upon him. He

traveled in the north to collect manuscripts. On a journey to Paris and the Netherlands, he discovered some lost orations of Cicero. In Italy, he found the manuscript of some of Cicero's letters to Atticus, to his brother Quintus, and to Brutus. "Whenever I took a journey," he said, "I always turned aside to any old monasteries that I chanced to see in the distance, saying to myself, 'who knows whether some scrap of the writings that I covet may not lie there?'" He recovered some of these writings, but he was more successful in stimulating others than in making great finds himself.

Upon his return from his northern journey, Petrarch settled near Avignon in a beautiful, secluded spot called Vaucluse. There he lived the life which he praised in his *De Vita Solitaria*, or "on the secluded life." Many of the books which were to make him famous were written at Vaucluse, where he lived a retired but epicurean life. There he received, on the same day, letters from the Senate at Rome and from the University of Paris offering him the crown of laurel for his poetry. The coincidence does not seem so remarkable to us, for we know it was contrived by Petrarch himself. Most of his books are conscious or unconscious autobiography, and the *De Vita Solitaria* belongs to this class. It is dedicated to a clerical friend. The title itself should call to mind the fact that monasticism was still a very active force in the world. Petrarch's only brother was a monk, and Petrarch admits that the brother had made the better choice. Not was this merely a formal concession. Petrarch himself wished to be a sincere follower of the faith as well as a humanist, and there was a lifelong conflict in his soul.

Three historical trends met in him to be resolved as they might be. From ancient times came the ideal of a liberal education, literally an education appropriate for freemen, not for slaves or the working class. This was the view expressed by Plato in the *Theatetus*, that only the man of leisure has opportunity to pursue truth for its own sake. All other men are driven by circumstances to sacrifice truth to expediency. The lawyer must serve his client; the merchant, the politician, and every practical man must seek a practical and never the ideal result. From the Middle Ages, in the second place, the monastic and in general the religious life called to Petrarch and his contemporaries to renounce the world and to accept truth from the hand of revelation. And recently, men had come to see again the greatness of ancient Rome and Roman literature. The way to truth and beauty seemed to Petrarch to lie in the study of the thoughts of the ancients, Cicero, Vergil, and Seneca. Each of these three traditions had a part in forming the mind of Petrarch.

In form, the *De Vita Solitaria* is an extended letter. The friend to whom it was addressed was never long absent from his thought as he penned its three hundred pages. And friendly converse was to be one of the chief

pleasures of this epicurean hermitage, for "no solitude is so profound, no house so small, no door so narrow, but it may open to a friend." In substance, he is writing about himself as one does in a letter, he is writing a vindication, an *apologia pro vita sua*. The book was written, as we have seen, at beautiful Vaucluse to extol the simple life. Occasionally we almost seem to catch the accents of Rousseau praising the life according to nature and leading an attack upon that sink of wickedness which is the city; but not for long. Almost immediately Petrarch turns upon himself to say that only a learned solitude is tolerable, one well stocked with books and applied to study and writing, in words like these "to read what our forerunners have written and to write what later generations may wish to read, to pay to posterity the debt which we cannot pay to the dead for the gift of their writings, and yet not remain altogether ungrateful to the dead, but to make their names more popular if they are unknown, to restore them if they have been forgotten, to dig them out if they have been buried in the ruins of time and to hand them down to our grandchildren as objects of veneration, to carry them in the heart, and by cherishing, remembering, and celebrating their fame in every way, to pay them a homage that is due to their genius even though it is not commensurate with their genius"—this is his ideal of the solitary life.

To what books did this fourteenth-century man of letters have access? His library of about two hundred volumes contained the great Roman historians, with the exception of Tacitus, and the great Roman poets, with the exception of Lucretius. He had the greater part of Quintilian and often quoted him. His Seneca and Cicero were not complete, but he had most of them; and he had several of the great Latin Fathers, Ambrose, Jerome, and Augustine, and used them. Petrarch was not able to read Greek but he had Latin translations of the *Timaeus* of Plato, the *Ethics* and *Politics* of Aristotle, and a crude version of Homer which Leontius Pilatus made for him and Boccaccio.

Some remarkable Latin finds were not made until after Petrarch's time. Niccolo Niccoli discovered a complete copy of Cicero's *De Oratore* which contains the orator's theory of education and his criticism of ancient educational practice. Poggio, in 1416, found at St. Gall a complete copy of Quintilian, a discovery which created remarkable enthusiasm among scholars. He also discovered a number of other rare works in the same monastery, including six of Cicero's orations.

6. THE RECOVERY OF GREEK AUTHORS

Most Greek literary manuscripts which remained had been transcribed within the bounds of the Byzantine empire. Even before the dispersion of

the manuscripts, which followed the fall of the capital to the Turks in 1453, Greeks had found their way to Italy and had taught their language there. The first of importance was Manuel Chrysoloras (c. 1350-1415) who came as an ambassador from the emperor and was persuaded by the city of Florence to stay to teach the Greek language. This engagement, said Symonds, assured the future of Greek in Europe. Beginning in 1396 he taught for three years at Florence and had among his pupils Guarino, Fiefelfo, Poggio, Leonardo Bruni, and Traversari. Chrysoloras seems to have left Florence for Pavia to escape the jealousy and spite of Niccolò Niccoli, Lorenzo de' Medici's literary adviser. Chrysoloras taught in Pavia until about 1400. His work was of the utmost importance to the study of Greek, and therefore to the proper understanding of the Latin authors and to the whole development of learning in the West.

Other Greeks came early in the fifteenth century. G. G. Plethon (c. 1355-1450), who was born at Constantinople, lectured in Florence and inspired the founding there of a Platonic academy, which affected the thought not alone of Italy but also of Germany Bessarion (1403-1472), who had been a pupil of Plethon, attended the Council of Florence in 1439, joined the Church of Rome, became a cardinal, and in 1471 was almost elected pope. His large collection of Greek manuscripts became the nucleus of the famous library of St. Mark's in Venice. Theodore Gaza (c. 1400-1475), another Greek, came to Italy in 1438. He became a teacher of Greek and, at the same time, a pupil in Latin in the school of Vittorino. Cardinal Bessarion became his patron and Pope Nicholas V invited him to Rome, in 1451, to aid in an ambitious program for the translation of the Greek classics into Latin. The death of the pope interfered with these plans, but Bessarion translated parts of Theophrastus and Aristotle into Latin and Cicero *On Old Age* and *On Friendship*, into Greek. He prepared the first fairly complete Greek grammar to be written in Italy. It was used long and widely as a textbook. Before this, Greek could be learned only by word of mouth, and competent teachers were scarce in the West before the time of Erasmus. Once the knowledge of the language had been recovered, and especially after Gaza and others had prepared grammars, classical Greek manuscripts became more important than Greek scholars. If, to the three whom we have already named, we add three more, George of Trebizond, called Trapezuntius (1424-1500), J. Argypopoulos (1416-1486), and Demetrius Chalcondylas (1424-1511), we shall have exhausted the list of the greatest of those who arrived in Italy before the fall of Constantinople. Trapezuntius, like Gaza, taught Greek and learned Latin under Vittorino and, like him also, prepared useful elementary grammars of the Greek language. These men were scholars as well as teachers, but they were primarily teachers.

Not only did Greek teachers come to Italy in the first half of the fifteenth century, but a movement in the opposite direction also took place. Italian scholars went to Constantinople, and resided there for long periods to learn the language and to gather manuscripts. Among these was Guarino da Verona (c. 1370-1460). For five years he lived at Constantinople, in the family of Chrysoloras, whose daughter he married. Returning to Italy he taught in Venice, where Vittorino was his pupil, later at Florence and Verona, and finally he became head of the famous Italian court-school at Ferrara. Guarino was active as an editor and commentator and served as translator to the Council of Ferrara (1438). He had a son, Battista, who succeeded him in the court-school of Ferrara. Battista wrote an account of his father's methods of teaching. It shows that a knowledge of Greek was by that time considered essential to the understanding of the Latin language and literature. The recovery of Greek had changed the Renaissance perspective of the history of culture and civilization.

Fifteen years later than Guarino, Aursipa (c. 1370-1459), a scholar from Sicily, visited Constantinople and returned in 1423 with more than two hundred manuscripts. Filelfo (1398-1481) served in a diplomatic post in the city on the Bosphorus and worked for seven years in its great libraries, returning with another large collection of Greek authors. Later he became a wandering scholar and lectured on the classics in the leading Italian cities. This illustrates the fact that there were few permanent positions for humanists in the Italian universities until the middle of the fifteenth century. The universities expended their energies upon the professional studies of law, medicine, and theology, and made no provision for liberal studies. Only very gradually did they establish chairs of rhetoric and poetry. The humanists, meanwhile, served as free-lance lecturers, took private pupils, found positions as secretaries or librarians, or enlisted under the banner of a wealthy patron.

7. DIFFUSION OF THE SOURCES

The next step to be taken, when many of the famous authors had been recovered, was the multiplication of copies in manuscript and printed form and the founding of libraries. The fifteenth century saw the formation of many remarkable collections; and their story was told by the shrewd but gossipy bookseller Vespasiano da Bisticci in his *Memoirs* of the illustrious men of his time. Libraries were built up by rulers like the Medici of Florence and the Sforza of Milan, by the higher clergy including the popes who developed the Vatican Library, by wealthy merchants and bankers, and by scholars. Vespasiano, who had every reason to be interested in the movement because he was the agent for many buyers, described the as-

sembling of almost a score of great libraries. Books were obtained by purchase when possible, but more frequently by having skillful writers make manuscript copies.

Classical libraries flourished for a half-century before the development of printing. A new class of professional writers distinguished both for their learning and their beautiful handwriting produced the finest manuscripts. Those who had mastered Greek received the honorable title of *scrittori* and were well paid, because they were few. The less highly educated and less skillful writers had to work for a moderate wage. Frequently scholars made their own copies, either because they were poor or because *scrittori* were not to be had. Petrarch thus copied with his own hand a work of Cicero, because he would not put up with the "vile sloth" of the available copyists. Not only the *scrittori* but some of the great scholars wrote the beautiful Italian hand which had come into use in the fourteenth century. Parchment was always used for the books that were intended for the great collections. The writing in these manuscripts is artistic and regular yet individual; and they are so appropriately ornamented with scrolls, miniatures, and borders that they are a delight to the eye. Every such book had a character of its own and was usually decked out with a sumptuous binding, often of velvet with silver clasps.

To provide some illustrative details we now turn to Vespasiano da Bisticci's *Lives of Illustrious Men of the Fifteenth Century*, usually called the Vespasiano Memoirs. The author lived from 1421 to 1498 and, through his business, came into intimate contact with many of the leading humanists, princes, and popes of that century. But he was more than a mere trader in manuscripts. He read widely and was a keen observer and a good judge of what would prove interesting about the life and character of the famous men whom he met. He was not a stylist; but his greatest weakness as a writer is due to his amiability; he presents his characters in a favorable light only.

From Vespasiano we learn that Nicholas V, before he became pope, wished for money to do two things: to build great edifices and to buy books. He did the latter even in his days of poverty, and during his pontificate he did both. His personal library included the complete works of St. Augustine in twelve fine volumes. He annotated the works of the ancients with his own hand. He was himself one of the finest of calligraphers. He was familiar with the whole of Latin and Greek literature; and he was more skilled in classifying books than anyone of his time. Hence, when Cosimo de Medici was furnishing a great library, he sent to Nicholas V for directions to guide him in organizing the collection. The pope gave similar aid to other library founders. All men of letters, said Vespasiano, owed much of the high regard in which their craft was held to the good

offices of Pope Nicholas. It was the purpose of this first humanist pope to found a great library at St. Peter's for the general use of the Roman court, and Vespasiano gave a list of the works which Pope Nicholas collected and the writers whom he employed.

Vespasiano presented even more elaborate accounts of the libraries of Federigo, Duke of Urbino, and of Cosimo de Medici. Duke Federigo's collection cost thirty thousand ducats, about seventy thousand dollars, worth three or four times that sum today. He spared neither cost nor labor and when he heard of a fine book, whether in Italy or elsewhere, he sent for it. After gathering all the notable titles in Latin, Greek, Hebrew, and Italian, he determined to dress every author worthily by binding him in scarlet and silver. "In this library," this dealer in fine manuscripts tells us, "all the books are superlatively good, and written with the pen, and had there been one printed volume it would have been ashamed in such company." From the account we learn that Vespasiano had before him complete catalogues of all the principal Italian libraries and even one of the library of Oxford University. We likewise have descriptions of the libraries established by Cosimo de Medici in Florence. When he did not have books enough to furnish the library of St. Mark's as it deserved, the executors of Niccolò Niccoli agreed to transfer all the books left by that scholar to St. Mark's, "letting the books be at the general service of all those who might like to use them." This contains the germ of the public library idea. In each book, there was a note indicating that it had belonged to the collection of Niccoli. When Cosimo wished to furnish the library of San Lorenzo he applied to Vespasiano, who told him that such a collection could not be purchased but that the books would have to be transcribed. And Vespasiano was commissioned to have the books copied. "He was anxious that I should use all possible despatch, and, after the library was begun, as there was no lack of money, I engaged forty-five scribes and completed two hundred volumes in twenty-two months, taking as a model the library of Pope Nicholas and following directions written by his own hand, which Pope Nicholas had given to Cosimo." According to this, it took one scribe about five months to complete a volume. The libraries of Bessarion, Alessandro Sforza, and others are also described by the genial bookseller of Florence. When the life of Vespasiano closed, in 1498, the day of the printed book was already far advanced. And, although the printing press was necessary for the wide dispersion of learning, the beginnings of humanism were made with manuscript sources. Petrarch and all the early scholars knew no other.

The use of movable type for printing on paper first came in about 1438. It had a very great influence in the spread of the classical authors and in providing books for schools. Now for the first time books became cheap

and uniform. Copies of the same edition were as like as two peas, paging and all. This was a great convenience for pupils and teachers. Grammars, dictionaries, phrase and conversation books, and other aids to learning came from the press. By and by even scholars and the wealthy purchased printed books; and printing in its turn became a fine art. Among the Renaissance printers who took a scholarly and an artistic interest in their products were Aldus of Venice, Froben of Basle, and the Estiennes of Paris and Geneva. The Aldine classics, in handy pocket form, were and are famous. Although the editions were small according to modern standards, running about three hundred copies each on the average, the printing press made possible a far wider distribution of good literature than the world had ever known.

The discovery and distribution of classical books led to critical work. Two forms of criticism are the textual and the historical. The autographs of the classics had all long since disappeared, and by repeated copyings the text had become corrupt, but the printers desired to issue the most accurate or authentic text that scholarship could produce. The textual critic, by collating the available manuscripts, attempted to settle from the various readings what the true or original reading was. Historical criticism aimed to determine the authorship, time of writing, the purpose of the author, and similar matters that were in doubt. Laurentius Valla worked along such lines in proving that the so-called *Donation of Constantine* was a forgery, produced not in the fourth century, as had been claimed, but in the seventh or some later time.

8. AN EARLY HUMANIST WRITER ON EDUCATION

The first great writer on education to recommend the new learning and to propose a liberal education as his aim was Pier Paolo Vergerio, or Vergerius. Vergerius was born in 1349 and became a professor at Padua and Florence. He lived too early to find a place in Vespasiano's gallery of famous humanists. When Chrysoloras came to Florence to introduce the study of Greek, Vergerius was already forty-seven years old, but so great was his enthusiasm for the new study that he took his place at school among the boys who were learning their declensions. His treatise, "On Character and Liberal Studies," was written eight years later (1404); and it is such a book as ought to be expected of a man of noble character who has devoted his days and nights to liberal studies. It is wise in its practical demands, elevated in tone, and charmingly written. For two centuries the little book was used as a guide by humanist educators; and today it provides an excellent introduction to the greatest of those teachers, Vittorino da Feltre. Before we take up Vittorino's school and the other humanist

schools we shall review the writings which served as guidebooks to the teachers of that time.

Vergerius wrote his little book for a particular boy of his acquaintance, one of the noble Carrara family. "Your distinguished ancestor," he said to the lad, "used to say that a parent owes his child three advantages: a good name, a country to be proud of, and a sound education. The last of these is the most important and failure in it is beyond remedy. You bear an honored name, you are of a house long eminent in 'our ancient and most learned city of Padua' The most important aim, now, is that you should secure a good education."

Until boys come to the age of understanding, rivalry is a necessary spur to learning. Talents differ, and those with only modest capacities have the most need of education that their defects may be made good. Evil conduct and sin must be rigorously repressed. Language must be carefully guarded. An unsocial temper must be mellowed and friendliness developed. Idleness, and intemperance in food and drink, are to be shunned. Children must not be too much indulged and therefore family education should be avoided.

Vergerius, like Vittorino, aimed to combine Christian faith and conduct with ancient learning. His definition of a liberal education has become classic and we quote it. "We call those studies liberal," he wrote, "which are worthy of a free man; those studies by which we attain and practice virtue and wisdom; that education which calls forth, trains, and develops those highest gifts of body and mind which ennoble men and which are rightly judged to rank next in dignity to virtue only, for to a vulgar temper gain and pleasure are the one aim of existence, to a lofty nature, moral worth and fame." Such an education must be begun early for we shall not attain wisdom in our later years unless in our earliest we enter sincerely on its search. To be able to speak and write with elegance is of the utmost advantage for both public and private life. And a knowledge of literature enables us to use our leisure pleasantly and profitably. Think, by contrast, of Domitian, who, although he was the son of an emperor, could find nothing more amusing for his leisure hours than killing flies. Literature we must remember consists not of facts alone but of thoughts and style also. I do not think that thoughts without style and certainly not facts alone will be likely to attract much notice or secure a sure survival. What greater charm can life offer than this power of making the past, the present, and even the future, our own by means of literature. We may say, with Cicero, How bright a household is the family of books.

Thus Vergerius had already begun to debate that common Renaissance topic, namely, what subjects of study are to be considered essential in a liberal education. The first and foremost is literature. An important part of literature is history, which is both attractive and useful. Moral philos-

ophy and eloquence follow close after. By philosophy we learn what is true; eloquence teaches us to say it convincingly; and history carries the light of experience. Poetry, music, logic, arithmetic, and geometry should be added and, if necessary, a professional study such as medicine or law.

How shall we teach and how learn? Vergernus warns against attempting too much at once or passing too rapidly from one subject to another. Only if we are systematic and put our heart into one subject at a time can we hope to succeed. Again, we must remember that mental endowments differ. Tasks and guidance must be adapted to the child's powers. Given good ability, three methods will be found useful: a systematic review every evening of what was done during the day; the practice of discussing each lesson with another student or with several; and the teaching to a younger student of what we have recently learned. Perseverance is essential. To give a set period to study every day, to work vigorously and to permit no interruption, is a practice which may be strongly recommended.

Education is to call forth and develop the highest gifts of body and mind. We have been speaking of the mind but you, he said to the boy, have wisely chosen to excel in both. And for physical and military fitness, courage and endurance are required. Here the Spartans and the Romans have set us the prime examples. "The Lacedaemonian discipline was indeed severe. The boys were so trained that in their contests they could not yield nor confess themselves vanquished; the severest tests produced no cry of pain, though blood might flow and consciousness itself give way. The result was that all antiquity rehearses the deathless courage of the Spartans in the field; their arms were to them part of their very selves, to be cast away, or laid down, only with their lives."

Training in arms should begin early, as soon as the boy is able to use his limbs. Those exercises should be chosen which will strengthen the body and maintain its health. Physical education, like mental, must be adapted to the child's nature and capacities. The Greek pentathlon, swimming, horsemanship, use of shield, spear, sword, and club all are necessary in the training of the soldier. The chariot of the Homeric Greeks and the legion of the Romans have both disappeared. We must adapt our training to our own day in which cavalry is the chief arm; and it is desirable to include the wider aspects of the art of war, such as strategy and tactics, discipline, supplies, and the management of encampments and winter quarters. Both war and peace will demand recreation, such as ball games, hunting, hawking and fishing, and, indoors, games of skill, not chance, music and song, and especially good books. Lastly we must not be neglectful of our personal habits. Our dress should be suitable to time, place, and circumstance, we should learn to be gracious in manner and of a cheerful spirit.

9. OTHER HUMANIST WRITERS

Some of the humanists favored the education of upper class girls in the new learning. Vittorino and his contemporaries acted on this principle, admitting girls to their classes. Within a year after Vergerius issued his treatise on the education of boys, Leonardo Bruni addressed an educational tract to Baptista Malatesta, daughter of the famous ducal house of Urbino. The tract covers only a few pages, and he used this space chiefly to select the subjects Baptista is to study. He recommended a full course of literature, history, and poetry. Like most humanists he condemned astrology; and for girls, mathematics was considered unsuitable. Rhetoric and oratory lie outside a woman's sphere of activity. Religion and ethics are, however, very important. Morals have been treated by the noblest minds of Greece and Rome. The Greek, Roman, and Christian ethical writers demand the serious study of a cultivated Christian lady. This, and all other studies, depend upon a sound foundation without which nothing can be accomplished; and that foundation consists in a thorough knowledge of the Latin language.

More elaborate was the treatise written for young King Ladislas of Bohemia by Aeneas Sylvius Piccolomini who afterwards became Pope Pius II. His contemporary, the famous architect L. B. Alberti, wrote a work on the management of a family which contains important sections on educational aims and the curriculum. One of the most systematic treatises of the whole Renaissance, arranged in six books, is by Maffeo Vegio. And Battista, the son and successor of Guarino da Verona, wrote an interesting and discriminating account of his father's views and practice.

Altogether we owe to the Italian humanists of the fourteenth and fifteenth centuries many works which deal wholly or in part with education. There was among these writers a singular unanimity in philosophy, curriculum, and method. This agreement was due to their limited materials, to the similarity of the conditions, and in particular to their dependence upon the same authorities, namely, Plato, Aristotle, Cicero, and especially Quintilian, whose *Institutes of Oratory* formed the great guidebook of the educators of the Renaissance.

The tract "Upon the Method of Teaching and of Reading the Classical Authors" by Battista Guarino (1459) is the first to give a prominent place to Greek studies. It, therefore, shows that the fifteenth century began a new phase in humanistic education. This is also shown by its narrower scope and its greater emphasis upon scholarship.

The sections upon methods of private study contain much good advice, some of which had already been given by Vergerius. Let the young

student think of himself as preparing to teach what he is studying, advice which Quintilian gave us long ago. Let him read not only the text but every commentary. The precise meaning and force of every word is to be determined. He must write out his notes as if for publication. The practice of making extracts is to be commended, as is that of providing parallel passages from several authors. Like the Pythagoreans, he must review each evening what he learned by day, each month the whole reading of the preceding four weeks. Translation and the comparison of translations by others are useful exercises. Reading aloud is valuable to mind and body. Definite hours must be devoted to study, and the plan decided upon must be followed without interruption. We must recognize the crucial importance of a regular system in study; it is as important as "harmony of time and note" in a chorus. In conclusion, Battista Guarino quotes Cicero on literature as the inspiration of youth, the joy of old age, the ornament of success, and the solace of adversity. Books do not offend or rebuke, call up no empty hopes or fears. Through books alone will our converse be with the best and greatest minds among all the mighty men of the past. No leisure could be more nobly occupied than one spent among books.

Such were the views on education of writers in the Italian revival during the fourteenth and fifteenth centuries. Education had come to mean the cultivation of mind and body, the coordination of Greek and Christian morals, and the development of man as a citizen. Letters were not to be an excuse for withdrawal from active life. Aesthetic cultivation, good conduct, polite manners, and patriotism were all supposed to grow out of the liberal education which all the humanists sought and praised. Letters and philosophy were regarded as the ideal preparation for professional study. Ancient writers were studied for aid in war, politics, agriculture, and other practical concerns. Yet some even then began to sense a danger in the compromises which were involved in the union of the new learning and the old, compromises between Greek and Christian ethics, between the new thirst for fame and the old humility, between the pagan classics and the Christian gospel. Individualism was becoming rampant and in extreme spirits overstepped all bounds in the later Renaissance. The old struggle between antiquity and Christian faith and morals was again breaking out. Among teachers who were able to effect a working compromise were Guarino da Verona and Vittorino da Feltre.

10. TWO GREAT TEACHERS

Guarino we have already noticed as a scholar in Greek and a collector of Greek manuscripts. His school at Ferrara attained a European reputation, and pupils came from distant countries, from Germany, France, and

even England. He made available in a Latin translation the educational essay which was attributed to Plutarch and which came to stand beside Quintilian on the humanist teacher's shelf of professional books. His moral character and his influence upon his students were greatly praised, and he read the Christian scriptures and the Church Fathers with his pupils. He was a thoroughgoing humanist scholar and a particular admirer of Cicero and Vergil. In a letter to a pupil he outlined a method of study which he ascribed to his father-in-law Chrysoloras. This concerns reading and interpretation. By reading aloud comprehension is aided. This is to be followed by grammatical analysis and a careful study of the exact sense, by repetition, and by a careful summary. Translation is not to be slavish but faithful. Beautiful passages are to be copied into a book of selections and to be memorized. The books that are read are to be discussed with other students and with friends. The educational doctrines given to the world by his son Battista, which have already been mentioned, were confessedly those of the father also.

Vittorino was more exclusively a teacher than Guarino. He wrote nothing, collected no manuscripts, took no part in public affairs, yet his fame was equally widespread and has proved just as lasting. Vittorino Rambaldoni of Feltre was born in a mountain village of the eastern Alps in 1378. The father, though poor, had some education and the town, though remote and lacking in cultural resources, yet gave Vittorino the opportunity to acquire the rudiments of Latin. At the age of eighteen he entered the university of Padua, with which Petrarch had been associated. He even studied under one of Petrarch's disciples; and he may have met Vergerius who was a Paduan professor. Being very poor, he earned his way by tutoring pupils in Latin. He studied mathematics, which was still a rare accomplishment, for Euclid was just being revived. For a while he lived in the house of Gasparino Barzizza, who was regarded as the greatest Latin scholar of that time. Among his companions were men soon to become famous such as Filelfo, and George of Trebizond. He studied Greek with Guarino, who upon his return from Constantinople set up a school in Venice.

He was a spare, active man, simple in his habits, dress, and tastes, and beloved in the best social circles of the city and the university. For twenty years he had been a student and a private and public teacher at Padua and at Venice. His schools had drawn to him the sons of the great families of the two cities. But he taught not only the rich. Remembering his own youthful struggles, he received some poor boys free while the rich paid the usual fees. In 1423, the Marquis of Mantua, Gianfrancesco Gonzaga, invited him to become head of the Mantuan court school. He had to be persuaded; concessions were offered. Vittorino might fix his own salary,

have complete control of school and pupils, continue his custom of giving free education to some talented poor boys; and it was urged as a great opportunity for a great teacher to have the chance to educate the future Marquis of Mantua. Although somewhat unwillingly, Vittorino consented and spent the remaining twenty-three years of his life as head of the court-school of Mantua.

The children of the prince formed the nucleus of the school. There were three boys and a girl when the master arrived. Another daughter, Cecilia, and a son were born later. The sons of the nobility and of rich merchants, together with poor boys of ability and many foreigners, swelled the numbers until there was a large boarding school. Learned Greeks from the East came to study Latin with Vittorino. The ages of the pupils varied. Some were as young as six or eight years and several stayed on until they were in the middle twenties and beyond. Valla, who was one of Vittorino's most famous pupils, remained until he was twenty-three but apparently served as an assistant. Sassuolo was twenty-one when he entered but he had charge of the music instruction and was, therefore, a teacher as well as a pupil. Other famous pupils were John Andrea, later a bishop, Corraro, Perotti, who became a professor of rhetoric and an official in the Roman Curia, and Ognibene, who was to be Vittorino's successor as head of the school.

The school was housed in a large casino or clubhouse, which had been called the House of Pleasure but which Vittorino renamed the Pleasant House and redecorated with murals of children at play. Surrounding this schoolhouse, which was flanked by other buildings used for sleeping and dining quarters, were large grounds with trees and gardens. Through the plain below, the Mincio River flowed. The great teacher was the father and companion of his school family. He took care of their health, took part in their games, and accompanied them to the foothills or the lakeshore in the hot summer. No luxuries were allowed even to princes. Strict discipline of the body by games and exercises, good manners and good conduct, and serious study were demanded of all. But the dominating influence in the school was the Christian spirit and the personality of Vittorino.

The youngest pupils began with letter games, spelling, and reading. Speaking and reading aloud with careful attention to articulation, tone, accent, and every quality of good speech were practiced daily. Declamation was taught as a means of eloquence. Composition and rhetoric were subjects of the greatest value to the future leader in public affairs or in the church. The Latin language was the language of instruction and the main subject of study. Greek was taught but not Italian, and this is what would be expected of a humanist. Few doubted and everyone hoped that classical Latin was henceforth to be the universal language of scholars and leaders.

The common people might have to be content with the common tongue. Vittorino laid great emphasis upon the parallel study of Greek and Latin, each reinforcing the other; the study of the languages implied the deep and broad study of their literatures. The school gave a complete education in both ancient languages, in literature, poetry, rhetoric, history, and mathematics. This was also one of the first Renaissance schools to include games and physical activities. The historians came in for particular attention, especially Livy. It was no accident that a pupil of Vittorino prepared the first printed edition of Livy. Arithmetic was taught for practical use and for training in accuracy. In its early stages it was taught in games as Plato had advised. Geometry was one of the studies which Vittorino loved and in which he had acquired fame as a teacher. Astronomy and the elements of physics or natural philosophy were also included. Among the school activities there were choral singing, instrumental music, and dancing.

Famous schools in the Renaissance were numerous, but none embodied more fully its educational ideals, the complete training of man for leisure and action, and especially for service to state and church, by means of the ancient literatures. The later humanists lost the fine early enthusiasm. Schools became harsh and the teaching more and more grammatical. Cicero became the sole model of style and was slavishly imitated. In the later schools, also, only short selections of the main authors were read, the scientific subjects were dropped out, mathematics was curtailed, and the time saved was devoted to the formal aspects of language, to prose style, and to the making of verses, against which Milton was to utter his maledictions. The freedom and spontaneity which had produced a Vittorino were lost from both the language and the schools of the humanists.

11. INFLUENCE OF THE REVIVAL ON EDUCATION

The most obvious educational influence from the Revival, if not the most important, came in the transformation and expansion of the curriculum. The classical Roman authors and some Greek writers, together with the necessary language studies, displaced the medieval trivium of grammar, rhetoric, and dialectic. Many more authors and greater ones were read in the humanist than in the medieval schools and the curriculum was thereby greatly enriched. The new aims were the understanding of literature and of life through literature, rather than skill in logic and the scholastic philosophy or the professional study of law or medicine. The humanists intended to offer a liberal, not a professional, education.

Of the authors, Cicero held the largest place. Not only his orations but also his letters, his *De Oratore* and *Brutus*, and his essays on friendship and

old age were read. In this connection, the imitation of Cicero's prose became far too much an aim of the schools. This degenerate stylism was known as Ciceronianism, a word which designates the formalism of the late Renaissance education. This was one of the decadent tendencies against which Erasmus broke a lance. As education became more formal, grammatical, and stylistic, the great literary works received less attention.

Besides Cicero, other prose writers, Quintilian, and the historians, Salust, Curtius, Caesar, and Livy were read. Virgil was the great poet of the schools, but others were introduced, especially Horace, Ovid, and Lucan. In the Greek, Homer, the dramatists, the historians and biographers Xenophon, Herodotus, Plutarch, and the orators Demosthenes and Isocrates were studied. Greek always received less emphasis than Latin. When the pupil could read and speak Latin he began rhetoric, composition, and oratory. Oratory again became one of the fine arts and held a much larger place in the Renaissance schools than it had in the Middle Ages. Latin composition and Latin verse-making were taught and usually Greek prose also. History as a science, the effort to learn what actually happened, was hardly understood in the Renaissance. On the contrary, it was more nearly a branch of ethics. Both history and ethics were studied for the same purpose, to improve public and private conduct.

Among the nonliterary studies, although the Revival and its schools were primarily literary, there were music and physical education including skill in the use of weapons. The new emphasis upon the body in the Renaissance was one of the most striking contrasts with the Middle Ages. This remarkable change of interest and values is exhibited even more clearly in painting and sculpture, but it is also evident in education. The medieval schools did not engage in sports and games and the use of arms. Then the body was to be mortified, but now it was to be developed, admired, and used for civic and personal success and glory. Music also came into the schools. Vittorino had a special teacher of music, Sassuolo. Alberti was one of the noted organists of the time and included music in his proposed curriculum. For their theory of education in music both Vittorino and Alberti went back to Aristotle, who held that music had several functions: it is good for diversion, recreation, moral and civic education, and purification or catharsis. Castiglione assigned an important place to music in the education of the courtier and the high-born lady. Many of the Renaissance writers distinguished between elevating and debasing music and insisted upon careful selection of the compositions which were to be used. Some were also critical of the general run of music masters, who seem to have had a bad name. Dancing was not generally approved by the Renaissance educators, although Vittorino taught it. Drawing was not usually included because it was regarded as a practical study, too closely connected with

gcometry, surveying, and engineering to be considered among the liberal studies. The natural sciences aroused little interest before the seventeenth century.

One of the greatest defects of the Renaissance curriculum was the complete omission of the vernacular; and this suggests the even more basic fact that the humanists had no conception of universal education and no message for the common people. The new studies appealed, however, to groups of people who might not have attended the medieval schools, such as the nobles, ruling classes, merchants, and bankers. When the poor were admitted into the new schools, they were drawn into the upper social strata. But the humanists, with few exceptions, did nothing to provide an appropriate education for the poor. The education of girls made some progress among the upper classes.

Important improvements were made in the equipment of the schools. The printing press provided uniform texts which made class discussion and the interpretation of the text feasible. It was no longer necessary to dictate the texts or to correct the numerous errors of manuscript copies. Aids to language study, grammars, lexicons, phrase books, and colloquies became numerous. Vastly more reading material became available. Themes, notebooks, and many new kinds of exercises were made possible through the use of paper.

New schools were founded, court-schools in Italy, collèges and lycées in France, the gymnasium in Germany, and the reformed grammar school in England. Schools were a little less likely to be controlled by the church. Their physical equipment was improved, playing fields were sometimes added, and there was a new attention to the health of the pupils. Friendlier relations were developed between teachers and pupils in the early Renaissance. Some of these gains were lost as the schools again became formal and standardized in the sixteenth century. And then a new, a realist revival occurred.

12. THE CLASSICS CROSSING THE ALPS

The great Latin classics were not widely studied in the north until about a century after their revival in Italy; and then, as in Italy, the Greek revival followed the Latin at a distance of about fifty years.

One of the earliest humanist circles in the north formed itself around Duke Humphrey of England about 1425. He was the first English patron of humanists, collector of classical manuscripts, and contributor to the classical collections of his own university, Oxford, where he had been a student of Balliol College. Among the Italian translators whom he employed was Antonio Beccaria who had been a pupil of Vittorino. Not long

after, young Englishmen began to go to Italy to study the classics just as, during the Middle Ages, they had gone to study law.

Holland and the Rhine country were not earlier in the field but were more important than England as centers of the rising northern humanism. In Holland the voluntary religious society called the Brethren of the Common Life was founded in the fourteenth century. The members, mostly ordinary middle class people, devoted themselves to pious works, the physical and spiritual care of students, copying manuscripts, teaching, and the establishment of schools. They were a loosely knit body, the members took no formal vows, and it is often difficult to distinguish the brothers from others who were only associated with them. Their early schools were not humanistic, but by 1500 a change in this respect was noticeable. Hegius, rector of the Brethren's school at Deventer, for example, placed that institution in the front rank of their schools; and, at his death in 1498, it was fairly classical in the content and spirit of its teaching.

Humanism developed slowly in France, where the University of Paris long opposed its introduction. The support of classical studies, in that country as in Italy, came more from the court and the princes than from the universities. When Francis I became king in 1515, the humanists rejoiced in the prospect of support for their studies and they were not disappointed. William Budé, a distinguished scholar, was made royal librarian; the Collège de France, a humanist institution, was founded; and a royal printing press was established, with Robert Estienne as printer. The city of Bordeaux in 1534 founded the Collège de Guyenne, where Élie Vinet and Mathurin Cordier later became teachers.

In Germany John Sturm organized the classical gymnasium of Strassburg about 1538. Rudolph Agricola was, however, the greatest of the early German classicists. But since the Reformation was, at first, a German revolution, we shall deal with the German humanists in the next chapter.

The transition from medieval to modern times is called the Renaissance. Many phases of life were affected, including the fine arts, politics, exploration, and scholarship. The scholarly phase, or Revival of Learning, was a return to ancient literature. Roman law, never wholly lost, was revived in the Middle Ages. Science, medicine, mathematics, and the works of Aristotle were brought by the Moslems. The humane letters of Greece and Rome had not yet been revived. The appreciative and critical study of these classical authors formed the Revival of Learning. This study implied the use of classical instead of medieval Latin.

The Renaissance was hardly less creative in education than it was in the fine arts. The Greek ideal of liberal education was revived and it marks a radical

change from medieval humility and submission. The Renaissance man tended to be proud, aggressive, and self-sufficient. These new attitudes influenced education in the direction of freedom for the individual; but the great teachers occupied an intermediate position on the question of freedom versus authority. The humanist schools thus repeated history by again attempting to combine classical and Christian ideals. They aimed to cultivate both mind and body; they tried to prepare their pupils for active work in the world, and they developed intelligent methods of study and teaching and introduced a new curriculum. The curriculum still was, as in the Middle Ages, a collection of authors; but these were the great writers of Greece and Rome, not mere summarizers; they were read in their own language; and they were read critically and with historical perspective, not as final authorities. The humanists favored the education of girls of the upper classes. They wrote industriously, but with limited originality, on educational theory. They created a new type of secondary school which still retains its prestige in large parts of the world, although it has everywhere come under heavy attack.

Humanism early developed a decadent tendency. It lost contact with science and with national and economic development; and the humanists were not interested in the education of the common people, nor in the common life, language, or literature. Humanist education acquired the faults of the ancient Roman schools. It became formal, stylistic, and declamatory; and it came to be, itself, in need of reform. Education was in transition but it did not in the Renaissance become fully modern.

QUESTIONS

1. How did the Italian Renaissance differ from the "Renaissance of the Twelfth Century"?
2. Consider chivalric education as a form of humanism.
3. If mathematics were to be regarded as a humanistic study, how should it be taught?
4. Were the great Greek and Roman writers humanists? Could humanism in the fourteenth century have developed without the ancient classics?
5. Did the Italian scholars become humanists because they studied the classics or did they study the classics because they were humanists?
6. What were the main characteristics of the Renaissance scholars? Which of these characteristics were exhibited in the life of Petrarch? Was Petrarch a wholly modern man?
7. Criticize, pro and con, the educational theory of Vergerius.
8. Discuss the judgment that the chief educational contribution of the Italian Renaissance was its emphasis upon individual liberty of thought and expression.
9. Does Vittorino deserve his fame as a great teacher? Why, or why not?
10. Compare the curricula of the Renaissance schools and the medieval schools.
11. What improvements in the equipment and the methods of the schools occurred during the Renaissance?

12. Compare the spread of the new learning to the north with the spread of commerce to the north.
13. To what new classes of the population, not reached by the medieval schools, did the humanist learning appeal?

FOR FURTHER READING AND STUDY

While there are many English books on the Italian Renaissance, to make a first-hand study of the period one would need a knowledge of other languages, especially Italian and Latin. Some of the sources are given in Woodward's *Vittorino da Feltre*, which is listed below. Attention should again be called to *A History of Classical Scholarship* by J. E. Sandys which is listed in Chapter V. Volume II of Sandys deals with classical scholarship in Italy in the fourteenth and fifteenth centuries. Burckhardt and Symonds, in the present bibliography, are of prime importance.

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- Watson, Foster, *Vives on Education*; A translation of the *De tradendis disciplinis*, Cambridge, University Press, 1913, 328 pp.
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- Zeitlin, Jacob, *The Life of Solitude by Francis Petrarch*, Urbana, Ill., University of Illinois Press, 1924, 316 pp. A translation with introduction and notes. This work by Petrarch shows that he was not wholly "modern."

7

THE REFORMATION
ERA

THE PROTESTANT REFORMATION AND THE DEVELOPMENT OF humanism north of the Alps were so closely interlinked that they may be treated together. Erasmus, who "laid the egg which Luther hatched," became prominent and his ideas influential between 1500 and 1520; and his lifetime of seventy years spans almost the whole period of humanistic development in the north. When Erasmus was born, sometime before 1470, the earliest northern humanists were still young. The Brethren of the Common Life, a famous Netherlands teaching society, did not become genuinely humanistic until the latter part of the fifteenth century. Greek was not much studied in the north before 1500. Most of the famous classical schools, including those established or reformed by Colet in London, Sturm in Strassburg, and Élie Vinet and his predecessors in Bordeaux, were products of the sixteenth century. The great system of the Jesuit classical schools hardly began before 1550.

All this shows the error of treating the northern revival of learning as if it had run its course before the Reformation. And the two movements were not merely contemporary but they were causally interrelated. They developed together and each modified the other. The individualist and critical attitudes of the Revival of Learning, its study of ancient authors, its tendency to regard original sources as authoritative, and its effort to recapture the glories of a great past could all be turned to the study of the Bible and to the establishment of a pure Bible text and to an attempt to recover the virtues of the primitive church. They not only could be but they were turned in these directions. On the other hand, by this preoccupation with the Bible and by the addition of Hebrew studies, northern humanism became differentiated from the Italian.

Although contemporary and causally interrelated, the two movements were not of equal scope. The Reformation was much broader than humanism and broader than all purely intellectual and aesthetic interests together. It developed into a social revolution, accented by the demand

of the common man for recognition. It also was, what it has been traditionally considered to be, a religious movement, but not so purely religious as the church historians would have it. To regard it as the Renaissance of the north is suggestive, a renaissance less individualistic, less pagan, less aesthetic, more economic, and more popular and democratic than the Italian.

The Reformation and humanism even came into direct conflict at times, so that Erasmus was led to say that "where Lutherism rules, letters die." There was much truth and some half-truth in this declaration of the great humanist. The truth was that the Reformation produced new orthodoxies, creeds, persecutions; a religion, dogmatic, harsh, narrow, leaving little freedom for humanistic studies; and the half-truth, the implication that these evils were of the essence of the Reformation and could not be overcome. Erasmus would not have denied that he had done much to release the revolutionary forces. He was the most effective critic of the evils of the time; and his edition of the Greek New Testament was the basis of vernacular translations into many languages, including the English.

1. BEFORE LUTHER

Other causes of the Reformation were political and economic. One of these was the rise of nations, whose interests conflicted with those of the international Roman church. Competition and rivalry between nations led to wars, such as the Hundred Years' War (1337-1453) between England and France, and wars have always been costly. At the same time an economic revolution was substituting a money economy and taxation for the old feudal services. But the vast lands and other properties of the church were not subject to taxation, and besides the pope secured much of his very large income through tithes, special taxes like the annates, the sale of indulgences, and other means. All this was drawn from the very same people whom the kings wanted to tax for the expenses of government. Whatever moneys the pope drew out of a kingdom, whatever lands and wealth were privileged and untaxable because they belonged to the church, were so much wealth withdrawn from civil and national uses, and the kings did not like the system. Here was the basis for a fundamental conflict between state and church.

The theory of papal supremacy over the civil power was reasserted by Pope Boniface VIII about 1300 in two famous bulls named, as is usually done, from their opening words, "Unam Sanctum" and "Clericis Laicos." In the latter document he forbade all civil authorities to collect, from the clergy, any taxes which he had not approved. The gage thus thrown down

was taken up by Philip, king of France. In 1302 he called the first parliament, the Estates General of France, and secured from them a denial of the right of the pope to interfere in the internal affairs of the nation and especially in taxation and fiscal matters. Although public opinion did not altogether favor the king, the majority supported him, thereby showing that in the fourteenth century the strongest nations were already capable of challenging the power of the papacy in matters of domestic policy. In England the issues were somewhat different, but the outcome was similar and resulted in limiting papal interference. Spain, beginning in 1381, set limits to the amount of papal taxes that could be imposed and insisted that only Spaniards might hold the episcopal office. That was the century of Dante who in his *de Monarchia* asserted the principle that the civil power should be separated from the ecclesiastical and that only the latter should be vested in the papacy. Nationalism was one of the modern forces which were to limit the power of the church; and we have pointed especially to the fiscal issue. The Protestant Reformation was to carry the matter much further until instead of one church a number of independent national churches were set up.

Meanwhile one nation, France, secured a preponderant influence over the papacy by removing its seat from Rome to Avignon, a city in the Rhone valley on the borders of France, where it was to remain for seventy years (1305-1377). This removal of the capital of Christendom and the resulting interference by the French kings in papal policy is called the "Babylonian Captivity" of the church. Following the death of Boniface VIII, the king of France secured the election of a French prelate to the papal chair. By removing to Avignon, the new pope, Clement V, and the church lost all that the Eternal City signified, and suffered incalculably in prestige and influence. The college of cardinals was packed with French ecclesiastics, and the Avignon popes, seven in number during these seventy years, were pro-French in policy. England, which during this long period was at war with France, came to regard the pope as the ally of her enemy. Even in German states a similar feeling developed. The German Diet of Frankfort (1338) solemnly declared that the king derived his right to rule from God directly and not through the pope. This version of the doctrine of the divine right of kings was thus a weapon to be used against the papacy and in the interest of national independence.

The Great Schism still further undermined the prestige and unity of the church. In 1377, Pope Gregory XI returned to Rome to recover his power over the papal states in Italy. When Gregory died, a disputed papal election led to the choice first of Urban VI, an Italian, and then of Clement VII, a Frenchman. France and her allies, including Scotland and Naples, supported Clement, while England led the party which favored

Urban. For forty years this division of the church continued, with two popes, hostile to each other, and each supported by an international party. This was the Great Schism. Many plans to heal the wounds of the church were proposed: arbitration, voluntary or forced resignations, the withdrawal of obedience from both incumbents, and the calling of a General Council. This last plan was the one finally adopted but not carried through until 1414.

The effects of the division were felt not only in religion but also in education. University students and professors were divided into hostile parties; and how, asked one great Paris master, can knowledge be acquired except in peace; but now, he added, scholars avoid the university altogether on account of this cursed division in the church. Heretics multiplied in number and boldness, and indeed a man might be a heretic under one pope and a true believer under the other.

Except for the Great Schism, Wycliffe might have remained a quiet theologian at Oxford. From the outbreak of the schism he began to move away from his earlier views until he had become a vigorous critic of the church. In his later years he did not scruple to call the pope Antichrist and to declare that no such office as the papacy is recognized in the Bible. Even the Apostles, he said, considered themselves only brethren. Wycliffe fought the church in England with "two swords," one his wandering, wayside preachers called Lollards, one of whom is described in Chaucer's Prologue, and the other his English version of the Bible for the common people. He anticipated later Protestants in his belief that all religious problems should be solved by direct reference to the Bible; and this helps to justify his historic title, "The Morning-Star of the Reformation." Wycliffe was protected by the powerful noble, John of Gaunt. But when Henry IV became king, with a somewhat doubtful title, he sought to gain the support of Rome by crushing all dissent in his kingdom. John of Gaunt and Wycliffe had already passed from the stage, but Wycliffe's wayside preachers were hunted down until by 1430 Lollardry had become practically extinct. Wycliffe's ideas, however, were carried to far-off Bohemia where they fell upon fertile soil among the Czechs.

The marriage of King Richard II to Anne of Bohemia and the presence of a great many Germans at their own University of Prague led many Bohemian students to migrate to Oxford. Many of these, when they returned home, brought back Wycliffe's ideas and his books. The age-old hostility of the Czechs toward the Germans, coupled with the fact that the church and the government of Bohemia were in German hands, made them the more hospitable to Wycliffe's anti-Roman Catholic principles. But even earlier, evangelical influences had been introduced among the Czechs from the Waldenses, a widely scattered body of heretics who

originated in the Rhone valley and in Switzerland. The Waldenses were simple peasants who took the Bible as their rule of life. In this respect they were similar to Wycliffe's preachers, and they spread their doctrines far and wide, a fact embodied in the poet Whittier's "The Vaudois Teacher." The persecution which they suffered during long periods led John Milton to write one of his most stirring sonnets, "Avenge, O Lord, Thy Slaughtered Saints." In Bohemia, they provided one of the influences which led to the reform activities of John Huss and Jerome of Prague. There were many of these evangelical groups, in many countries, in the later Middle Ages. Another heretical sect, which diverged much farther from orthodox Christianity, was the Albigenses who were ruthlessly exterminated by the Inquisition. The existence of all these dissenters, whether they were more or less radical, shows the widespread dissatisfaction that existed before the Reformation and the potential following that awaited any powerful leader who should appear. Huss was such a leader.

John Huss was a popular preacher interested in practical religion and critical of conditions in the church. Already somewhat acquainted with Wycliffe's writings, he was completely converted to Wycliffe's views by Jerome of Prague who returned from Oxford in 1401 with some Wycliffe's later books. His Czech countrymen supported him the more heartily, because he was opposed by the Germans. The common people especially rallied around him while the higher clergy attacked his theological and social views. Meanwhile, the Council of Pisa had been called and had chosen another pope, John XXIII, thus adding a third contender to the claimants of the papal office. Conditions in Bohemia were one of the concerns of the Council of Pisa; and the new pope, in an effort to curb the growing heresy, granted special indulgences to those who would help to put down the Hussite movement. Jerome of Prague, in reply, led a mob in burning the papal bull in the public square of Prague. National aspirations, racial hatreds, the demand for purer living by the clergy, free thought stimulated by Bible reading, the financial exactions of the Roman church, and the scandal of the schism had reinforced each other to produce the Bohemian rebellion and a century later, were to cooperate to produce the great revolution which is called the Reformation.

In the efforts to heal the Great Schism two parties developed. The conciliar party held that the authority of a general council is superior to that of a pope. The opposing party held that the pope was supreme and that only the pope could call a council to deal with the ills of the church. The conciliar party, supported by the most noted theologians of the University of Paris and aided by the failure of all other efforts to heal the schism, won a temporary victory in the Council of Pisa; and won a further victory in persuading Pope John XXIII to call the Council of Constance

John thought he could dominate that Council, but he was mistaken. On assembling at Constance in the autumn of 1414, the new Council adopted rules of procedure which assured that the prelates who favored extensive reforms would have control and that the influence of the Italian clergy would be curbed. Pope John was displeased with this action because he had expected to have his own election confirmed and the other contenders, Gregory XII and Benedict XIII, deposed. Instead he was now to be treated as one of three rivals. John left the Council and denounced its proceedings, but the leaders were not to be intimidated and eventually they deposed all three of the contenders.

One of the main problems to come before the Council of Constance was the Hussite rebellion. Huss had been summoned before the Council and came with an assurance of safe conduct from the Emperor, Sigismund. In May 1415, the previous condemnation of Wycliffe was reaffirmed and his writings were committed to the flames. Next Huss was brought up for trial, was condemned, and went to the stake bravely refusing to recant unless his errors could be demonstrated from the Scriptures. The emperor protested these measures but eventually agreed to violate his pledged word because he was assured that promises to a heretic have no binding force. After this the Council reached a stalemate. Controversy over the reform of the episcopal system and the papal administration and even over the question of future regular meetings of church councils so divided the prelates that little further was accomplished. The conciliar party had a plan to moderate the absolutism of the pope but failed to get it adopted. The most that was accomplished was to provide for the calling of future councils at intervals of five, seven, and ten years. By 1417 the Council of Constance was so divided that they were just barely able to agree on a procedure to elect a new pope. The choice fell upon an Italian cardinal, who took the name of Martin V, and who became the head of a reunited church. The Great Schism was over, and in April 1418 the new pope dissolved the Council. It is doubtful whether it could have accomplished anything more by continuing its meetings.

It was during the Council of Constance that Poggio Braccolini, who attended as a secretary, visited the monastic library of St. Gall and discovered there a complete copy of Quintilian, a find which aroused the greatest enthusiasm among the Italian humanists. Unfortunately, the prelates attending the Council also borrowed from the library, for use at the meetings, large numbers of the most valuable books, such as copies of the Church Fathers and books on canon law, and these were never returned. The manuscript library of one of the most famous monasteries of Europe was, therefore, definitely poorer because the Council had met in its neighborhood.

2. INVENTION OF PRINTING

Meanwhile printing had come into use throughout western Europe, and its influence in informing the people and creating a large and active public in favor of reform is one of the most weighty factors in the success of the German revolt under Luther. It was also highly important in education, in both the humanistic and the popular schools. Indeed, the influence of printing upon popular education and the spread of knowledge which it facilitated would be hard to overestimate; and it is hard even to realize it without a good deal of thought and study. Not only were books made accessible at lower cost and in uniform editions, but in printed books spelling began to be standardized, a great improvement over the chaotic spellings of the Middle Ages; reference books such as dictionaries and books of selections appeared; and beyond the school itself printing aided the development of a popular literature which all the people were eager to read.

The free use of paper further aided in transforming school exercises. The writing of themes and letters, the collection of favorite passages and of word lists, the taking of reading and lecture notes were made possible. Arithmetic, which had been taught with counters and the abacus, could now be carried on "with the pen."

Paper had been introduced into Europe, and paper mills had gradually increased in number in the later medieval centuries. Movable type was invented in Holland or Germany, perhaps about 1425, probably by more than one inventor, and the Gutenberg Bible was printed in 1456 at Mainz. From Holland and Germany, printing spread to other countries. The first press in Italy was set up near the Benedictine monastery of Monte Cassino in 1465. Caxton, the first English printer, set up his press in a monastery in 1477. He was not only the first printer in England but also the first to print in the English language. The famous Aldine press was established at Venice in 1490 and at once became famous for its handy-volume editions of the classics. Froben of Basel conducted a press notable for its editions of the great Church Fathers. Erasmus worked for both the Aldine and the Froben presses. The press of the Estiennes was first set up in Paris but, when this family joined the Protestant cause, they removed it to Geneva where they long continued to serve the cause of learning and the reformed religion.

Printing was well developed and widely spread before the Lutheran revolt began and became a powerful agency for the dissemination not only of humanist learning but also of Lutheran doctrine. It became also a similarly important influence in developing literacy. Luther's tracts, ser-

mons, and addresses were bought in great numbers, showing that many people could read. His address *To the Christian Nobility of the German Nation* sold five thousand copies within a very short time. In the quarter-century between 1500 and 1525, the annual number of books published in German rose from forty to five hundred. Many of these books dealt with the questions which were raised by the reform tendencies of the Reformation, and a large number were written by Luther himself. Many tracts, pamphlets, and sermons were published and widely circulated—"winged words," they were called. It has been said that Luther created the book trade in Germany, but this is an exaggeration. He greatly stimulated the circulation of books, but there were already a growing literature and many vernacular readers before he was born.

3 VERNACULAR BIBLES

The Bible was the favorite book among the common people. We have seen that it was circulated in manuscript copies by the Lollards in England; and on the continent there were many other translations of the Bible before the Reformation. They must have had a great influence in furthering the movement. One evidence is the fact that many of the clergy opposed its circulation and regarded its promiscuous reading as a cause of heresy. Over and over the medieval church, or at least some of the churchmen, forbade the reading of the Scriptures by laymen; but again, in other cases, they tolerated the reading of it by pious people when there was no danger of controversy. The bishops disagreed among themselves. When Tyndale's translation of the New Testament was smuggled into England, the archbishop of Canterbury burned every copy he could find, while the bishop of Norwich highly commended the work. Humanists, though devout Catholics, were generally favorable; but these were merely personal and unofficial opinions. Sir Thomas More is an example. He wrote: "I myself have seen and can show you Bibles fair and old, written in English, which have been known and seen by the bishop of the diocese, and left in the hand of laymen and women, whom he knew to be good Catholic people who used the books with devotion and soberness." More estimated that sixty per cent of the English people in the sixteenth century could read their own language, a valuable bit of testimony, although too generous perhaps, on the extent of literacy at that time. Erasmus also expressed the liberal Catholic position. He wrote with his usual eloquence: "I wish that even the weakest woman might read the Gospels and the Epistles of St. Paul. I wish they were translated into all the languages so as to be read and understood not only by Scots and Irishmen but even by Saracens and Turks. But the first step to their being read is to make them

intelligible to the reader. I long for the day when the ploughman would sing a text of the Scripture at his ploughbeam; and that the weaver at his loom with this would drive away the tediousness of time, and the way-faring man with this pastime would overcome the weariness of his journey. And to be short, I would that all the conversation of the Christian should be of the Scripture, for in a manner such are we ourselves as our daily tales are." This was the attitude of a liberal who favored a liberal but Catholic Christianity. The day of liberal Christianity had already dawned when Erasmus wrote, but in a large part of Europe it was no longer to be Catholic. Of the old church, it is perhaps fair to say that it tolerated rather than approved, when it did not condemn the reading of the Bible in the common tongue.

Especially in Germany, the land of many early printing presses, there had been many vernacular translations. This was partly due to the variety of languages and dialects spoken in the German lands, a region which extended from the Netherlands in the west to the lower Danube valley on the east. The early German presses produced devotional books and Bibles in much larger numbers than classical works. Conrad Celtes, the humanist and university teacher, warned the priests that soon every village ale-house, if not every family, would have a Bible. Twenty-two editions of the Psalms, twenty-five of the New Testament or large portions of it, and fourteen or more of the whole Bible were printed on German presses before the Lutheran Reformation began. All of these were translated from the Latin Vulgate; they have no connection with the still earlier translations by Wycliffe, the Waldenses, and the Hussites. Their existence shows the strong religious interests of the German people; and those who read them had their minds prepared for the teachings of the reformers. Their wide circulation shows the growth of a laymen's evangelical religion of personal devotion.

This personal religion of Holland and Germany was not wholly unorganized even before the Reformation. As early as the beginning of the fourteenth century, mystics like Eckhart, Tauler, and the author of the *Imitatio Christi* gathered their followers into devotional groups. One of the largest and most influential of these societies was the one founded by Gerhard Groot in the Netherlands and called the Brethren of the Common Life, also called Hieronymians, a word derived from Jerome.

The Hieronymians were especially important for their schools. By 1384 they had more than forty centers where they taught children and copied manuscripts; and they set up Latin schools as well. At first they taught the subjects of the Trivium, and Erasmus was one of their pupils. When the revival of learning developed in the north, their schools, as we have seen, became classical and they enlisted a long line of famous humanist

teachers. Alexander Hegius was headmaster at Deventer of a school which at one time enrolled two thousand pupils. Meanwhile they continued their popular teaching, gathering children and adults into schoolrooms and reading and expounding the New Testament and other religious books in the vernacular. They raised questions and led in discussions to solve the religious difficulties of their audiences. Spreading over western Germany, they did much to arouse and foster the religious life. There is evidence of their connection with the Hussites and the Waldenses in the fact that all of these used the same catechism for the instruction of children. It was printed in the German, French, Italian, Czech, and perhaps other languages. Such religious conditions are as important for the history of vernacular education as they are for the history of the Reformation.

4. TOWNS AND SCHOOLS

Town life developed rapidly in Germany in the last two centuries of the Middle Ages, and a great desire for education spread in all these growing centers. Prague secured a university in 1348, the first such foundation in Germany. It became the center of the Bohemian heresy, as we have seen. Between 1348 and 1500, thirteen other German universities were established, including the famous ones of Heidelberg, Leipzig, and Tübingen. Wittenberg, where Luther taught, was founded in 1502. Numerous schools also sprang into life, founded by wealthy citizens or by the municipalities themselves. Students came long distances, often from foreign countries, to attend school or university. This was also the era of the wandering scholars who secured food by begging and often by stealing. The autobiography of Thomas Platter, a Swiss lad who spent several years with a band of students or vagantes traveling from school to school, convinces the reader that many of these institutions were of little value. Breslau was famous for a whole system of cathedral, gild, and vernacular schools. Thomas Platter, who attended one of its Latin schools, has left a graphic description of its arrangements and exercises. "In the school of St. Elizabeth," he wrote, "nine bachelors of arts read lectures at the same hour in the same room. Greek had not yet penetrated into that part of the world. No one had any printed books except the preceptor, who had a Terence. What was read had first to be dictated, then punctuated, then construed, and at last explained." This was in the sixteenth century. No wonder he soon moved on in search of better instruction! He finally found it and became a learned man and a famous teacher. Indeed, there were many good schools. Luther himself had been a begging student who sang for his bread in the streets of "the dear town of Eisenach" until kind Frau Cotta gave him a home. In after years he denounced the begging

system as a waste of valuable time and a temptation to vagrancy and worse. Germany had no lack of schools by 1450 or 1500, but the curriculum in most was still medieval, giving training in logical forms but little usable knowledge.

5. INTRODUCTION OF HUMANISM IN THE NORTH

The founders of the new order of humanistic education obtained their inspiration in Italy. One of the first was Nicholas of Cusa (1401-1464), who became a cardinal and a philosopher. As a student of astronomy, he came close to anticipating Copernicus. Thoroughly trained in the scholastic learning, he learned to love the classics which he studied in Italy. A less reputable and indeed notorious figure among the early German humanists was Peter Luder (1415-1474). He also began as a churchman, but he acquired in Italy not only the classics but also a total contempt for religion and even ordinary morals. He taught classical learning at Heidelberg but met great opposition, partly because of disreputable conduct, and he ended as a teacher of medicine at Vienna. John Wessel of Groningen (1420-1489) studied with the Brethren of the Common Life at their large school at Zwolle where he made contact with Thomas à Kempis, who influenced him profoundly. When he reached the highest class he also did some teaching in the lower classes, for that was the practice in the school. He had been a poor boy, a baker's son, but his ability won him generous patrons, including Pope Sixtus IV. When he had finished his studies in Italy and was ready to return home, the Pope said to the young scholar, "Ask what you please as a parting gift." "Give me," was the request, "books from your library, Greek and Hebrew." One of the books given him was a copy of the Gospels in Greek which is thought to have reached the hand of Erasmus when he was working on the second edition of his New Testament. Wessel taught at Heidelberg and also worked as a reformer of schools. In his views on indulgences he seems to have held a position similar to Luther's.

Rudolph Agricola (1444-1485), like Erasmus, was the son of a priest. From childhood he was passionately fond of music, learned to play the organ, and built a small one for himself. It is said that he added the vox *humana* stop to the instrument. Like other humanists, he studied in numerous places, the elements at Erfurt, at Cologne, and at Louvain, where he attained the master's degree, law and rhetoric at Pavia, and the classics at Ferrara, where, he said "*literae humaniores* seem to be in the very air." He was a pupil of the younger Guarino and of Theodore Gaza. Unlike most of the humanists, he paid considerable attention to the modern languages, learning German, French, and Italian. He wrote a few books

and taught for a short time at Heidelberg but he died early. Like Erasmus, he taught that the true end of liberal education is moral conduct. He had a great reputation among his contemporaries, and his stimulating example was his chief contribution to German humanism.

The greatest of the northern humanists, perhaps the greatest of all humanists, was Erasmus. He treasured not only the classical heritage but that of the gospels as well. Between the two he saw no deep gulf but believed that they could be joined together and that their union would produce the fruits of sound learning, peace, moral conduct, and the good life. His influence extended throughout civilized Europe, among Catholics and Protestants, and has continued through succeeding centuries.

His first schoolbook came into the world almost by accident. This was the *Adages or Familiar Quotations from the Classics*. It is a collection of brief passages from the great writers. Each of these is used as a text for his own commentary; and the commentary is often studded with further apt quotations from ancients and moderns. It began as a small manuscript but with every successive edition it became larger. Although it was intended for schoolboys, it was read and quoted by everyone who read Latin literature and later was also translated into all the modern tongues. Very similar was the growth and history of his *Colloquies* which was intended to aid the acquisition of an easy Latin style while also imparting information and stimulating the thought of students. Schoolbooks in the form of colloquies or conversations were provided by many authors in the Renaissance. Next to that of Erasmus in popularity was one written by Corderius, the great Genevan teacher. Erasmus wrote an *Enchiridion*, which may mean either handbook or dagger, for the Christian soldier. He wrote a great satire, the *Praise of Folly*, and an argument against war, the *Complaint of Peace*. Dealing with education in the professional sense were his *On the Right Method of Teaching*, and *Training Young Children in Virtue and Sound Learning*. He collaborated with William Lyly, in preparing a Latin grammar for St. Paul's school in London. He prepared a new edition of an elementary Latin reading book, the *Distichs of Cato*. For advanced classes he prepared editions of the Greek and Roman classics; and he also wrote on the pronunciation of the ancient languages.

Of all the books prepared by Erasmus, his edition of the New Testament in the original Greek had the widest influence and revealed best his central purpose, namely, to make the "philosophy of Christ" prevail. The revival of learning had brought the classics back to life and into current use; but in the north, attention was soon focused upon the classics of the church, the Old and New Testaments, and the writings of the Fathers. Valla, in his critical works, had already shown the method by which these

were to be studied to bring out their true historical sense. Erasmus had, in 1504, found a copy of Valla's *Notes on the New Testament*. Even earlier, perhaps, Colet's lectures had convinced him of the need for a critical edition of that central Christian book. Many other scholars also were beginning to feel the same need if they were to deal historically and critically with the sources. Spanish scholars, under the lead of Cardinal Ximenes, were producing a careful edition of the whole Bible from several ancient editions and versions, the Complutensian Polyglot. The earliest volume of this extensive work contained the New Testament in Greek and was printed in 1514 but was not published until 1520. Meanwhile Erasmus issued his Greek New Testament in 1516. He continued to work on the text, collating new manuscripts, and prepared a second edition in 1519 and a third in 1522. New vernacular translations from Erasmus's text were made almost immediately. Luther made his German translation at the Wartburg in 1519; Lefèvre, a French version in 1520; and Tyndale, in 1525, the first English New Testament to be translated out of the Greek. A Spanish translation from the Erasmian text came out in 1543. The reformed churches introduced these new translations into their church services and the common people read them in their homes.

The new textual scholarship was greatly indebted to the printing press. Before books were printed no scholar could be sure that his text would remain in the form which he had given it. No one could be certain that later manuscript copies would agree in all respects with the originals. Copyists carelessly or ignorantly introduced many errors. Thus two students working on different copies of the same work could never be sure that they had the same text before them. They had to expect omissions, interpolations, crude errors such as misplaced lines, and other forms of inaccuracy. Uniform texts hardly existed. And a text once rectified would not stay corrected in later copies but would again become corrupt. Under such conditions, to correct a manuscript would hardly seem worth the pains. But when printing came in, all this was changed. Erasmus's *New Testament*, when struck off by Froben's press, was the same in its hundredth copy as in its first. This made the gradual improvement of a text possible as new and better manuscript authorities were discovered.

This is what was actually done with the *New Testament* and all the ancient books. Textual criticism became a progressive and is by now almost an exact science. This was a gain, not only for the textual critic and the scholar, but also for the humblest teacher who could now be assured that his own copy of Terence, for example, and those of his schoolboys were identical, an obvious advantage in school exercises. And there was another and greater advantage. The text was brought into closer agreement with the original.

6. THE STUDY OF HEBREW

Before the Reformation, another literary controversy introduced a third language, the Hebrew, into the repertoire of northern scholars. Ranged against the New Learning was the whole weight of scholasticism and the power of the Dominican Order, then in a dominant position in the most powerful universities. The central figure in the controversy over the study of Hebrew was John Reuchlin; and it finally ended in the publication in 1516 of one of the most famous satires of that time, the *Epistolae Obscurorum Virorum*, or the *Letters of Obscure Men*. The anonymous authors, self-styled obscure, directed their shafts against ignorance but also against the sloth and immorality of the monks and those in high places in the church. And theirs was not the first such attack upon vice and obscurantism among the shepherds of the flock. Three centuries earlier a German minnesinger, Walther von der Vogelweide, had put into verse the northern resentment against papal exactions. He wrote:

All their goods will be mine,
 Their silver is flowing into my far-away chest;
 Their priests are feeding on poultry and wine,
 And leaving the foolish fellows to fast.

Chaucer had slyly pictured the monk, dressed in fur, with a "love-knot" on the gold pin in his cravat and riding a fine horse among the footsore pilgrims to a holy shrine. Sebastian Brandt's *Ship of Fools* and Erasmus's *Praise of Folly* were more recent attacks upon hypocrisy and other evils among the privileged classes. The *Letters of Obscure Men* was only the most sarcastic attack and the last before Luther. It was occasioned by the controversy over Reuchlin's Hebrew studies.

The scholar and Hebraist, John Reuchlin, was born in 1455 in a little town in the Black Forest, the son of a burgher family. Entering the university at fifteen, he quickly mastered the Latin tongue. At Paris and Basel he studied Greek and at Orleans and Poitiers he became a doctor of laws. He continued his Greek studies in Italy and made such progress that it was said in eulogy, "Greece has flown over the Alps." At that time he was only twenty-six. Returning home he was employed in judicial and diplomatic work but continued his studies; and in 1492 he again visited Italy where he came under the spell of Pico della Mirandola who taught him to believe that in the mysteries of the Jewish Cabbala there lay the key to unlock the common Truth, which Plato in his philosophy and Christianity in its doctrine had separately expressed. But to use the Cabbala, he needed a knowledge of the Hebrew language. This he at once

proceeded to acquire from learned Italian Jews. As the Jews had never at any period ceased to read their ancient works in the original, there was no question of a recovery; but Reuchlin was one of the first Gentile humanists to become skilled in the Hebrew language. Within a few years he published an enthusiastic eulogy of that tongue, the holy language, in which "God speaks with men." Upon returning to Heidelberg he was welcomed by the learned but was soon employed by the Elector Philip on a diplomatic mission to Italy where he renewed the opportunity to study the language. In 1506 he published an elementary Hebrew grammar and dictionary which introduced many to Semitic studies. A few years later (1509) an unexpected controversy arose over his work. It was started by John Pfefferkorn, a Jew recently converted to Christianity. With the zeal of a new convert and the support of the Dominicans of Cologne he conceived the plan of compelling all Jews to become Christians by confiscating all their ancient books, the Old Testament alone excepted. He secured the qualified support of Emperor Maximilian. Reuchlin refused to lend his aid to the scheme; but the universities and scholars generally divided into hostile camps over the issue, with the humanists and liberals supporting Reuchlin. The dispute led to much virulent writing and was finally carried up to the Papal Court for decision. The humanist Pope, Leo X, was not much interested in the quarrel but with the aid of Dominican funds the case dragged on for years. Those to whom the matter was referred voted in favor of Reuchlin but the decision was not published until 1520. By that time the Reformation had broken out, and the former decision was reversed and sentence was given against Reuchlin. Reuchlin died soon after without having been further molested.

7. THE LUTHERAN MOVEMENT

The attack of Luther upon the papacy, like most great historical movements, grew out of an incident, a campaign for the sale of indulgences in the neighborhood of Wittenberg. The idea of indulgences and reconciliation for sinners was very old. In early days of Christianity the congregations themselves expelled flagrant offenders against the Christian code and readmitted them upon confession and penitence. In time this right of the congregations and their control over the penalties imposed for sin were taken over by the priests, then by the bishops, and at last by the pope. In the thirteenth century the doctrine of a treasury of good works was developed. Under this conception the sinner was to benefit from the good deeds of the pious and the virtues of the saints. All these merits could be dispensed by the church to erring brethren as indulgences to release their souls from the penalties imposed by the church. Some of the

indulgence-sellers, however, claimed much more for their wares and great abuses arose from the fact that the indulgences came to be sold for cash. Thus a money payment was added to or even substituted for penance. As early as the first crusade, Pope Urban II (1095) promised the crusaders a complete remission of all penances for taking part in the movement. The privilege of selling indulgences was also granted to cathedrals and to religious orders as a means of raising money. In the sixteenth century, the rebuilding of St. Peter's at Rome was under way and money for the work was raised by the sale of indulgence-tickets. Tetzel, the papal agent who had charge of the sale near Wittenberg, seems to have used reprehensible methods to increase his sales. This aroused Luther, who on All-Saints Day of 1517 posted his Ninety-five Theses against indulgences and other practices of which he did not approve. He attacked claims that indulgences could remove guilt and remit punishment for sin, and declared that the true treasury of merits is the Gospel. The Theses had an unprecedented circulation and were translated out of the original Latin into German and within two weeks were read all over Germany.

Luther had intended to hold an ordinary university disputation with his colleagues; instead, he found himself the leader in a national movement which led step by step to a complete break with the Roman church. The sale of indulgences fell off rapidly, but the matter did not end there. Attacks upon the Theses were answered by Luther in words that were read even more widely than the original document. His colleagues at Wittenberg supported him, and the students burned the countertheses of Tetzel and other opponents. Luther was summoned to Rome but he did not go. He appealed to his prince, the Elector Frederick, who took a deep interest in the quarrel and who was too powerful to be overawed. It was the disputation at Leipzig in 1519 which really opened Luther's eyes and the eyes of all Germany to the meaning of the revolution which was in progress. They now saw that the result would be separation from the church of Rome and the substitution of the Bible for the medieval ecclesiastical system as the rule of life. The young German humanists, the burghers in the cities, the common people who desired a free national church, and the princes who wanted to avoid the drain of money from their states generally supported the reforming party. Luther's pen was never at rest. He issued sermons, pamphlets, and books which were read everywhere. The printing press of Froben was very active in spreading his writings. All this is further evidence that many thousands in Germany could read and that there must have been many schools which have left no trace in the record, schools in homes and in the shops of tailors, saddlers, and other indoor workers. Many also may have learned to read without actually going to school.

Three of Luther's early books may be named: *The Liberty of a Christian Man*; *To the Christian Nobility of the German Nation*, which called for extensive educational reforms; and *On the Babylonian Captivity of the Church*. These "three great Reformation treatises" were written in 1520. In that year also the pope issued his excommunication of Luther, but he found the greatest difficulty in having it even published in Germany. The Electoral Council of Saxony, universities, and even bishops pretended to believe that it was not genuine. On December 10, in the presence of students, professors, and citizens, Luther solemnly burned the papal bull of excommunication outside the Elster Gate of Wittenberg. The separation from Rome was a fact.

When ecclesiastical measures failed to crush Luther, the church turned to the empire; when he could not be reached as a heretic, they attempted to have him declared an outlaw. Charles V became emperor in 1520 and held his first German Diet early in the next year. Luther was summoned to appear under a safe-conduct and did so in April 1521. In the august assembly, addressing the emperor and the princes, Luther not only refused to recant but reaffirmed his teaching in a quiet but determined speech which received the enthusiastic approval of the German princes and people and was roundly condemned by the emperor and his party. A month later Luther was placed under the imperial ban; but the ban could not be executed. For his own safety, Luther was concealed in the Wartburg by his friends. Political conditions made impossible the execution of the ban, for Charles was never free to exert the whole weight of the empire against the Germans. The imperial rule was threatened on the east by the invading Turks, who had come up the Danube valley until they were at the gates of Vienna, and on the west by the kingdom of France. Before the emperor was free from these threats to his power, the Reformation had proceeded to a point where it was impossible to crush it even by the united power of pope and emperor. Before Luther's death, in 1546, much the larger portion of the German empire had become Protestant. That area stretched along the Baltic from Holland to East Prussia and south in lines meeting in Switzerland. In this general region Protestant churches and schools had been established. Some regions within this triangle, however, remained Catholic; and large sections outside it became Protestant.

Since the Protestant churches regarded teaching as one of their main functions, they were even more interested in schools than the Catholic church had been; and we have seen that the Catholic church was the one great teaching institution for many centuries. Protestantism, however, held that everyone should be taught the Scriptures as the basis of his faith and life, of his private devotions and his participation in public worship,

and of his duties as a member or vestryman, elder, or other official of the church. The new churches were as much concerned for the education of leaders and more than the old church had been for the education of members, men and women, boys and girls. This last point is significant, for the Reformation gave the first widely applicable reason for the education of girls. Only a few nuns and a few wealthy or noble women were educated in earlier periods. Though Luther was not a humanist, he favored the education both of the common people and of future leaders in church and state. He did not create vernacular education, which had been growing for several centuries, but he did what he could to further it. And in the vernacular schools, which developed after the Reformation, the children of the common people, boys and girls, received an elementary education.

The educational needs of the new period were greater and the resources were less than they had been. The Reformation, like all revolutions, was the cause of disorder and destruction which tended to make the improvement and even the maintenance of schools more difficult. The monasteries and their schools and scriptoria were closed; foundations, scholarships, and endowments were embezzled by princes and nobles; many positions which had been filled by learned men were abolished; and much civil disorder and religious warfare resulted from the Reformation.

The large number of positions which were abolished may be seen from the fact that a city of fifty thousand people sometimes had as many as eight hundred priests, or one for every sixty-five of the population. To this we must add the persons connected with monasteries, chantries, and other institutions if we would get a full measure of the vast number of clergy in the medieval church. And, Luther said, because selfish parents see that they can no longer place their children on the bounty of monasteries and cathedrals, they refuse to educate them. "Why," they say, "should we educate our children if they are not to become priests, monks, and nuns, and thus earn a support?" The hollow piety and selfish aims of such persons, he adds, are sufficiently evident from their confession.

School and university attendance declined rapidly in the period. The universities of Erfurt and Rostock never recovered from the losses sustained; but the numbers at Cologne, Vienna, Leipzig, and Basel also were greatly reduced. Professorships were abandoned because there were no students to be taught. Only little Wittenberg, founded in 1502, said Luther, is doing its best; but even Wittenberg lost three-fourths of its enrollment in the disastrous 1520's.

Luther attempted to stem the tide by his *Address to the Christian Nobility of Germany* (1520); by a *Letter to the Mayors and Aldermen in Behalf of Christian Schools* (1524); and by a *Sermon on the Duty of Sending Children to School* (1530). We should notice that these writings are

addressed to rulers, civil officers, and parents, not to the clergy or the churches. One reason for this was that he realized the need of the state for educated public servants; and another that he needed the aid of the state to preserve the Reformation and to carry out his program for church and school. He was the first modern writer to urge compulsory attendance and proposed that the state should pass such legislation and enforce it. It was not until long after his death that any state followed his suggestion. Many of the larger nations did not enact compulsory attendance laws until the latter part of the nineteenth century, but the little state of Weimar, in 1619, demanded the compulsory education of all children in the vernacular. In all states, large and small, enforcement of such laws lagged considerably behind enactment.

Luther favored a broader curriculum for the vernacular school. Such schools at that time usually taught merely reading or reading with writing and arithmetic. There were also special schools of writing, arithmetic, and bookkeeping. He proposed to have music, poetry, and history, and "the whole course of mathematics" introduced. Luther was himself musical and would have both singing and instrumental music taught. He placed a high estimate upon the work of the teacher and declared that his vocation was, next to that of the ministry, "the highest and best." Schools were to be cheerful and pleasant so that children might take delight in acquiring knowledge. In language typically vigorous and violent, he described the old school of the Middle Ages as "a hell or purgatory in which children were tortured and in which with much flogging and wretchedness they learned nothing." Unfortunately school discipline was not so easily reformed but remained harsh even until recent times. To show how easily an education might be acquired, he declared that he would be satisfied with a school which should be in session only two hours a day. With good methods and stimulating, friendly teachers that would be enough. The rest of the child's day could be devoted to play and to the learning of a trade. Luther did not propose any innovation in industrial education, as is sometimes claimed. Apprenticeship was common and effective and he was satisfied with its results. On secondary education, in which he was greatly interested, he had fewer suggestions to make. Along with all the other reformers, he supported the current classical program and emphasized the study of "the holy languages," Latin, Greek, and Hebrew. They were considered "holy" as well as "learned" because they were considered essential in the study of the Scriptures. Every "promising lad" was to be enabled and encouraged to attend a secondary school and, after that, the university.

In northern Germany, John Bugenhagen reorganized the churches, the Latin schools, and the parish schools in which German reading and writing were taught. Bugenhagen also worked in Denmark, and schools were de-

veloped for the common people in all the Scandinavian countries. Ability to read was made a requirement for confirmation and this, in turn, a prerequisite to marriage. Thus an indirect form of compulsory schooling was developed. Melancthon reformed the schools of Saxony, providing for elementary schools and especially Latin schools, in which he was most interested. John Sturm organized his Protestant humanistic gymnasium at Strassburg in 1538. This school, with its nine-year course, was the first example of a type which became the dominant secondary school of Germany for centuries and which remains to the present. One important fact about these and other German schools of the Reformation era is that state and church cooperated in their establishment and maintenance. The Reformation marks an important period in the transfer of the educational functions from the church to the state. From this time on, for several centuries, we see the increasing activity of the state in education until, in the eighteenth and early nineteenth centuries and after the democratic revolutions, the state took over these functions almost completely. As a result of this movement, elementary and secondary schools have become secular and civil rather than religious institutions.

8. SPREAD OF THE REFORMATION

The movement inaugurated by Luther spread far beyond Germany. The leader in Switzerland was a young humanist who was so fond of music that he had contemplated entering a monastery to secure the leisure for developing his musical talents. His family did not wish him to become a monk and he became an eloquent and popular preacher instead. His name was Ulrich Zwingli. Coming to Zürich in 1519, he became the admired leader of a circle of young liberals. The reform movement began there almost immediately. Zwingli read one of the books of John Huss and was led to the conclusion that church tithes were or should be only voluntary offerings. From this he went on until Zürich, Basel, and Berne became fully Protestant. The mass was abolished by the citizens and council of Berne in 1528. The Swiss, in 1529, separated themselves from the Lutheran movement and developed an independent church, the German Reformed. The American branch of this Zwinglian church is now called the Reformed Church of the United States.

Geneva, in western Switzerland, became the capital of Calvinism. In the same year (1536), the city became politically independent and Protestant. Calvin's doctrinal position was accepted by the Huguenots of France, the Dutch Reformed communion of Holland, the Presbyterians of Scotland, and the Puritans of England and America.

John Calvin (1509-1564) grew up in Picardy, among a people known

for their sympathy with Wycliffe and Huss. He was a brilliant student and was thoroughly educated in the classics, the law, and theology. Mathurin Cordier, already mentioned in connection with the Collège de Guyenne, was one of his teachers. At the University of Paris, Calvin belonged to the Collège de Montaigu, Erasmus's old school. About the same time another student, who was to become a world-famous leader, entered the same college. His name was Ignatius Loyola. Whether the future reformer and the founder of the Society of Jesus ever met is not known. Calvin was a Protestant as early as 1532, but he was not compelled to flee from France until three years later. After short periods at Strassburg and Basel he came to Geneva.

Calvin is often blamed for the harsh laws and cruel criminal code of Geneva. These accusations are not altogether justified. The city of Geneva was a free republic. Although Calvin was extremely influential in the government, the city was ruled by the Council. The citizens and the Council must share the blame for its "blue laws" and criminal code. Calvin did not create them; but he acquiesced in them, and he did not attempt to change them. The "blue laws," or sumptuary laws, of Geneva were similar to those of Nuremberg and other cities at that time. Restrictions which we would regard as gross tyranny were common. In Geneva, the dress of the different classes of citizens, the number of guests at weddings, and similar matters were prescribed by law. So with the burning of Michael Servetus (1509-1553) the scientist. Servetus was condemned as a criminal in a regular trial and punished according to law by the Council of Geneva. Servetus was a unitarian; this was his heresy; and heresy was then considered as treason. Servetus was executed by the barbarous method which was then used in such cases. He was burned at the stake. The Protestants of France and Switzerland, in 1903, erected an "expiatory monument" to him. In the inscription they acknowledge their debt to the great reformer, Calvin, but condemn his error, which they say "was the error of his time."

The secondary school of Geneva had seven classes. It was a humanistic school with a thorough course in Latin, Greek, and rhetoric. Calvin drew several famous teachers to Geneva, including Cordier, Theodore Beza (1519-1605), who prepared a French translation of the New Testament, and Castellion (1515-1563), the author of a book of *Colloquies*. The Academy of Geneva (1559) was the nucleus of a university; but, at first, it gave instruction only in advanced humanistic studies and theology. Medicine and theology were added later. The schools of the city attracted many foreign students who in their turn spread the educational influence of Geneva. And, in fact, Calvinism had an international aspect. Its interest in universal education, in the separation of church and state, and in a

church government in which laymen participated influenced many countries. Two of these countries, Holland and Scotland, were particularly influential in promoting these principles in America.

10. THE REFORMATION IN ENGLAND

The Reformation in England was a political change rather than a religious movement among the people. Parliament in 1534 passed the Act of Supremacy, which separated England from Rome. The English Bible became common in the homes and the English language was used in the services of the church. An English catechism and the Book of Common Prayer were provided.

In England as in Germany the Reformation was educationally destructive. The monasteries and chantries were closed and their funds for the most part appropriated to political ends. Along with the monasteries, the monastic grammar schools were abolished and England was left poorer in educational opportunities than it had been before the Reformation. Although some schools were refounded, and some new schools were opened, the losses of the Reformation were not made good for a long time. Nothing was done by the government and little by the Anglican church for elementary education. Private schools of the most diverse qualities grew up in villages and towns. Many of these were mere dame schools. Thus England developed a *laissez faire* attitude in education which was to delay the development of an educational system and of universal opportunity for schooling until the latter nineteenth century, and of secondary education until the twentieth century. English individualism tended to restrict the functions and powers of government within narrow limits, and these limits did not permit the government to deal with schools. English religious toleration and the consequent growth of many dissenting sects, coupled with the desire to inculcate some form of religious belief in each school, further limited the educational activity of government. Churches and private individuals or groups, however, established schools. The dissenting academies of the seventeenth century were one such response.

A difficult social problem and a great deal of hardship to the poor were occasioned by the decline of the gilds, the destruction of the monasteries, and the Enclosure Acts, all at the same period. The Reformation dried up many of the old streams of charitable aid; and the enclosing of the common lands for use as "sheep walks" or ranches deprived the poor of means of subsistence and firewood which they had from the commons. Thomas More, in his *Utopia*, refers to England as a country in which "sheep eat men." A series of laws were passed to restrict begging, to require the parishes to support their poor, and to provide for the teaching of

trades by means of a system of publicly supported apprenticeship. The intention was to prevent the growth of a pauper class by aid to vocational education. Near the close of the reign of Elizabeth, the previous fragmentary legislation was codified in the English Poor and Apprenticeship Law of 1601 which, among other obligations, enjoined the overseers of the poor in each locality to furnish materials, to build workhouses or to bind out children, and to make systematic arrangements to teach useful trades to the young poor. Similar laws were passed but not well enforced in the colonies which were soon to be founded in America. The Massachusetts education law of 1642 and a Virginia statute of nearly the same time exhibit the influence of English experience with apprenticeship laws during the preceding century.

11. THE JESUITS

The Society of Jesus, commonly known as the Jesuits, was founded in 1534, through the efforts of Ignatius Loyola (1491-1556), and was recognized by the Roman church six years later. They immediately became active as preachers, missionaries, teachers, and school founders. They became a kind of flying squadron to recover for the Roman church the territories lost through the Protestant revolution and to spread her influence to new countries. Active almost everywhere in Europe, the Jesuits soon came to America with the purpose of converting the Indians. As a result, they also became explorers in Canada and in the Mississippi and Ohio valleys. They went to Africa, to China, to India as missionaries. All those who were sent out to distant lands as well as those who worked in Europe were given a thorough education in the schools they established.

Ignatius Loyola was chosen General of his order and received the vows of his companions in 1541. The new Society became famous almost immediately, and numbers sought to join. A strict military discipline was decided upon from the first. There were four classes of associates: the novices, who were all carefully selected for zeal, devotion, and ability; the scholastics, who had been novices for at least two years and who had to spend at least five years in study and five more as teachers in junior classes; the coadjutors, who were preachers and teachers and from whom the heads of schools and houses were chosen; and the professed, who alone could share in the government of the Society. This long winnowing process assured that every Jesuit was a picked and a marked man. The Constitution gave the General almost absolute power over the lives, the consciences, and the activities of the members; yet it also provided for a system of surveillance and an elaborate use of the confessional intended to keep everybody, even the General, in the line of duty and to prevent all illicit changes in

the Constitution. The government of the Society is autocratic and absolute and the General is a veritable Czar. Historians, for example Ranke in his *History of the Papacy*, have not been slow to point out that, along with much that is good, this Society has done a great deal of evil through its secret and ruthless political machinations, its casuistry, and its blind obedience to the Catholic church.

The Society became powerful almost at once in Italy and Portugal. Progress was slower in Spain where the hostile Dominican Order was in power. Schools and colleges were developed early in these countries. In France, also, there was much opposition, but colleges were founded at St. Omer, Douai, and Rheims. From the beginning, Ignatius saw a promising field in Germany and, while the Society was not able to destroy the work of the Reformation, they effectively prevented its spread to regions which were in imminent danger of becoming Protestant. This statement applies particularly to Austria where the colleges, which were founded at Vienna and Ingolstadt, became centers of Jesuit propaganda and education. In a century, the Society had six hundred schools; and in two centuries, eight or nine hundred. Some of their schools were large, the largest ones enrolling as many as a thousand or even two thousand pupils. Many of the most famous schools were in France.

At the height of their power, the Jesuits were the most successful educators in Europe. Their schools were permanent, well supported, and well organized, their teachers were selected and thoroughly educated in what they taught and in the methods of discipline and teaching. Everything was prescribed, not only the subjects and methods, but also the interpretations. The teachers had no freedom, and no innovations or experiments were allowed. They had a limited and attainable aim and used every available means to reach it. The fourth part of the Jesuit Constitution is the plan of studies, called the *Ratio Studiorum*. The Ratio was fully worked out and several times revised in the light of experience in teaching between the years 1584 and 1599, when it was adopted and issued to the schools. This work is a set of directions to teachers and school officers and it prescribes a system which leaves little to their judgment. It is an iron-clad scheme. Once adopted, it became the law of Jesuit education until the suppression of the Society by the pope in 1773. After the Society was reestablished in 1814, the Ratio was revised again (1832) and some emphasis was placed upon the vernacular language.

The Jesuit schools are almost exclusively secondary and higher institutions. At first, Loyola had devoted a portion of his efforts to social reform. He set up two orphanages in Rome, one for boys and one for girls. In these two hundred children were fed, clothed, and taught. The teaching included some handwork and vocational work. But this was soon given

up, and thereafter the Society, except as an occasional work of charity, devoted all its educational efforts to the classical and theological education of boys and young men. There were no Jesuit schools for girls. The colleges were divided into junior and senior divisions. The former had a six-year course devoted to Latin grammar, literature, and rhetoric, and the latter a four-year course in literature, rhetoric, and logic. After completing the junior division, the future member of the Society was occupied for two years in the religious activities of his novitiate; and the senior division was followed by a period of several years in cadet or practice teaching under supervision. The whole program occupied the Jesuit up to the age of thirty or longer, when he became a full member of the Society and a professor. In the higher colleges, mathematics, logic, philosophy, and theology were taught in a course of from four to six years. The Greek and Hebrew languages were included but the emphasis throughout was upon the Latin. It was the language of instruction and conversation, in and out of school, although even in the Ratio of 1599 the vernacular was permitted as an aid in teaching beginning pupils. Extraordinary emphasis was placed upon skill in speaking and writing idiomatic Latin fluently. Equal emphasis was placed upon skill in argument, upon a knowledge of philosophy and theology, and upon the development of character and complete devotion to the Society and the Roman church. It may be as well to say that these ends do not seem to have been always compatible, each with the others.

The colleges were supported by endowments and donations; instruction was free. Externs, that is those who had not the intention of becoming Jesuits, were admitted, and contributions were often obtained from their parents. The Society became rich and has always catered to the wealthy, the aristocratic, and the powerful classes. But the success of the schools was due neither to money, which gave the means, nor to the curriculum, which was simply the formalized humanism of the sixteenth century. Their success was due to their organization, methods, and men. The conduct of the pupils at their lessons and at play, and the methods of the teachers, were closely supervised. Supervision was exercised by the rector of each school and by his prefect of studies and prefect of discipline. The teachers were as carefully supervised as the pupils. A system of spying, or "manifestation" as it is called by Jesuits, was used in the schools and in the Society. Once a year each school was inspected by the provincial who had charge of the schools over a large area. The discipline, while firm, was mild and gentle, especially as compared with the brutality which ruled in the schools of the sixteenth century. Much use was made of rivalry and competition. Each boy had his opponent, each group of ten was pitted against another group of ten, and classes vied with classes.

One of the striking elements of Jesuit method was the assignment or

prelection. We give a greatly shortened example from the Ratio. It says: Let the teacher read the whole passage through. Let him explain the topic and its connection with what went before. After reading a single Latin sentence, let him explain the difficult words and phrases, not merely substituting one hard word for another. The vernacular may be used if necessary. Let him explain the allusions and make observations suitable to each class. Such was the prelection.

Another element in Jesuit method was the repetition. "At the end of the lectures some students, about ten at a time, will repeat during half an hour what they have heard, one of their fellow students of the Society, if possible, being put in charge of each group of ten." This passage illustrates another practice of the Jesuit schools, the use of monitors in teaching. Systematic daily, weekly, monthly, and yearly reviews were also carried out. Carefully organized written examinations were given. Add to this that the teachers were men selected for their ability and zeal; that they were prepared for their work by study and by teaching under the guidance of skillful teachers; and that they prepared to devote their lives to this profession, and we shall understand why Francis Bacon, who was not a Jesuit, could say that the Jesuit schools were the best in Europe. He should have said, best for the purpose which the Society followed.

12. OTHER CATHOLIC SOCIETIES

Other teaching societies, besides the Jesuits, developed Catholic schools. The Oratory of Divine Love grew up in Rome as a voluntary association, originally of fifty or more laymen and clergy, who were interested in church reform and devoted to humanism, a pure life, and the theology of St. Augustine. Scattered by the sack of Rome in 1527, some of them found new homes in Venice, Genoa, and other cities where they formed groups of "Christian academies." Influenced by this Italian Oratory, the French Cardinal de Berulle in 1611 established the Oratory of France. De Berulle and his followers were devout Catholics who wished to improve the discipline and education of priests. The Oratory grew rapidly and established some famous schools such as the one at Juilly. They were influenced by the writings of Descartes; and the philosopher Malebranche was a member of the order. They aimed to cultivate close personal relations between teachers and pupils. Their schools were conducted in French and taught mathematics, physics, and the natural sciences. Polite accomplishments such as dancing and various games were taught. The Oratorians paid special attention to music and were known as "*les pères au beau chant*." Palestrina had been an adherent of St. Philip Neri, one of the founders of the Italian Oratory, and had composed music for the congregation. The learned lan-

guages were not neglected, but their schools were realistic, a type which will be treated in the next chapter. The word oratorio seems to be derived from the name of these societies.

The Port Royalists, or Jansenists, which were founded by St. Cyran and Cornelius Jansen, established schools that resembled those of the Oratory. The theology of both groups was derived from St. Augustine; and their ascetic outlook led the Port Royalists to supervise their pupils very closely. For this reason, the schools and classes were kept small and the teachers lived with their pupils. The curriculum was, in general, similar to that of the Oratorians, although dancing was omitted. The Port Royalists, however, made an advance over the Oratorians by their excellent teaching of the French language and of logic. In logic, they used the inductive method. Their teachers wrote textbooks in grammar and logic that were widely used. The "Little Schools of Port Royal" lasted only from about 1646 to 1661 when, through the opposition of the Jesuits, the society was dispersed. Their influence was far greater than their small numbers and short period of activity would suggest. Blaise Pascal was their greatest defender.

Catholic charity schools for the poor were established by several societies. One of these was the Brothers of the Christian Schools, founded by Jean Baptiste de la Salle in 1684. They were required to dedicate their lives to teaching and agreed not to become priests. They taught the vernacular language and religion. La Salle wrote a book of directions on organizing schools and teaching. It is called *The Conduct of Schools* and in general purpose, not in content, might be compared with the *Ratio Studiorum* of the Jesuits. The Christian Brothers developed a class system of teaching as compared with individual instruction. They classified their students into proficiency groups, used monitors to teach the younger pupils, and established a normal school for the preparation of teachers. Their schools increased rapidly in France and spread to foreign countries.

The Order of Ursulines was a society of nuns, devoted to the education of girls. France, in the seventeenth century, showed a strong interest in the best types of education for girls. The Abbé Fénelon wrote a widely influential book, *On the Education of Girls*. Fénelon believed that girls should be educated for homemaking and the care of a household as a career. This involved some training in law and business affairs and economic principles. An example of Fénelon's influence is seen in the fact that when the Philadelphia physician, Benjamin Rush, wrote on the education of American girls he followed the French abbé's outline. Fénelon had the direction of the education of some pupils of the royal family of France and prepared some historical and ethical books for them. These were read not only by schoolboys but by almost all readers of French literature. The

most famous was *Télémaque*, a story which teaches that rulers should be the servants of their peoples.

The Reformation period greatly extended the educational opportunities of the common people, Catholic and Protestant, boys and girls. In secondary education, it continued the humanistic tradition and used the old humanities for the service of the church. At the same time, it tended to overemphasize grammar and style and thus narrowed the meaning of humanism until it became largely linguistic. The Reformation also gave an opening for the civil governments to participate more actively in education; and this trend toward state education continued to grow in the following centuries.

The Reformation was a social evolution growing out of political, economic, moral, intellectual, and religious changes. Intellectually, the Reformation was connected with the humanist movement. Both appealed to individual judgment, original sources, and the inspiration which was to be derived from a revered past. The Reformation directed its intellectual activity not so much toward aesthetic and political ends as to Bible study by means of the original tongues. Old Testament scholarship demanded a knowledge of Hebrew; and New Testament studies were aided by the revival of Greek and the more authentic Greek texts of Erasmus and others. The Reformation was, therefore, related to the Revival of Learning, but it was a broader movement.

The Reformation was a popular, not an aristocratic movement. Salvation by faith was an individualist principle. It applied to everyone of both sexes. It implied individual understanding. The Protestant religion became the religion of a book, the Bible, and personal faith presupposed knowledge and understanding of the Bible. On this path the reformers were led to support universal education. The Reformation was also a nationalist movement and resulted in the creation of national churches which used the national language in their services and their parish schools. The Reformation promoted, and was promoted by, the increasing use of the printing press. The vernacular school was adopted by the new churches with the favor and sometimes with the financial support of the government. This was the opening stage of the long progress toward national education, a result which the reformers neither foresaw nor desired.

Catholic education, which did not follow this trend, was led by the late humanistic secondary schools of the Jesuits and the schools of the Christian Brothers which provided elementary, vernacular education for poor children. The schools of the Christian Brothers taught reading, writing, arithmetic, morals, religion, and sometimes spinning or some other manual work. The curriculum of the elementary schools, both Protestant and Catholic, rarely extended beyond these subjects. These were class schools and only much later were they superseded by the common, civil schools.

QUESTIONS

1. In what respects may the Renaissance in the north and the Reformation be linked as parts of a single movement? In what respects may they be distinguished from each other?
2. Which of the causes of the Reformation affected education and in what ways?
3. Was the extraordinary emotion generated by the Reformation due solely to piety and interest in religion? Explain.
4. Consider the invention of printing as a means in the democratization of knowledge. In what sense do you use the word "democratization"?
5. Consider the influence of the invention of printing upon the Reformation movement.
6. Find some good books on the subject and trace the early history of the English Bible.
7. How did humanism in the north differ from humanism in Italy? How was it related to the Reformation?
8. Why did the Protestant churches regard teaching as one of their chief functions? The Roman Catholic Church had conducted schools for a long time. Was the Protestant attitude on education different from the Catholic?
9. What were the names of the secondary schools of the Renaissance-Reformation period in the several countries? How similar or different were they?
10. In what way is the political doctrine of Calvin of importance in education?
11. Why was Holland a center of great educational activity in the Reformation period?
12. Trace the different uses of the word "public" as it has been, in different places and periods, applied to schools and education.
13. How did the Reformation affect education in the American colonies?
14. Why were the Jesuit schools highly praised in the sixteenth and seventeenth centuries?

FOR FURTHER READING AND STUDY

The Reformation and the Society of Jesus are both highly controversial subjects, and although we have space for only a few titles, an attempt has been made to give representation to several interpretations. A few biographies of Erasmus and of Luther out of many are given.

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8 FROM HUMANISM TO REALISM

NOT ONLY THE MEANING BUT ALSO THE PRACTICAL VALUE OF science was becoming clear in the seventeenth century as its application to military affairs and to surgery and medicine came to be recognized. New schools, called academies, began to provide a more practical education, including some of the sciences and mathematics. The French and German academies were intended for the noble and fashionable classes but in England the academy was patronized by the mercantile and manufacturing classes, who were beginning to share in the leadership of society. The advances in natural science and education were paralleled by new doctrines of religious and political liberty, by the rise of international law, and by the foundation of modern philosophy. Both the national and cosmopolitan trends of the century helped to place the modern languages in a more favored position than they had ever occupied. The great writers of the time, Bacon, Locke, Descartes, began to make more use of the mother tongue, and the realist schools gave a place to modern foreign languages in their schedules.

Educational writers, such as Comenius and Locke, gave further emphasis to the need for modern curricula and improved methods, while Comenius and Mulcaster favored universal education. A deep and widespread optimism characterized the century, and utopists like Campanella and Andreae attempted to bring education into closer connection with society itself. One of the ways in which they attempted to do this was by supporting industrial and vocational education in schools. This was a new demand. Schools had always dealt with words and ideas but now they were asked to introduce materials and tools and to teach trades. Much progress was made in the century but more would have been possible had it not been for the religious wars that followed the Reformation: the Huguenot wars in France, the Puritan struggle in England, and the terrible and devastating Thirty Years War in Germany. The utilitarian and realist tendencies in education were also held back by the continued success of the Jesuit schools

in Catholic countries. In the seventeenth century the Jesuits were still the greatest educators in Europe, and realism could make little progress wherever their formal classicism was dominant. In spite of these deterrent influences, the seventeenth and eighteenth centuries, not the Renaissance, mark the real beginning of modern education.

1. THE MEANING OF REALISM

Realism in education may be compared with realism in philosophy, or art, or literary criticism. It connotes concrete knowledge, practical and vocational skills, the learning of languages for commercial or diplomatic rather than for literary use, and the study of history, politics, law, and the sciences. It is, negatively, a reaction against the literary and artistic purposes of the Renaissance and against the classics. Among the realists, the fine arts, music, dancing, and even literature, were given very little place or none at all. Greek had always been a poor second to Latin in the schools of western Europe and the realists wished to dispense with it altogether. In the seventeenth century, they still demanded instruction in Latin, not for the humanistic reason that it is the key to a great literature, but because it continued to be widely used as the medium of communication in public affairs, in the sciences, by the universities, in international correspondence, and by the Catholic church.

One of the catchwords of realism was "things before words," and this was sometimes taken to mean "things and not words." But words themselves are "things" and will repay careful study. On the other hand, many real things can hardly be studied at all except by the extensive and careful use of words. Such "things" are the French Revolution, courage, loyalty, devotion to duty and country, and the doctrine of evolution. No one recommends mere verbalism, but neither should we attempt to teach a science, a craft, or even swimming, without the use of words. And yet the realists emphasized an important element in all education, namely, the value of direct experience as a basis for teaching and learning.

A broad curriculum was one of the features of realism. It is not unusual to find seventeenth-century realists proposing the study of twenty-five or thirty subjects, including two or three languages such as Latin, French, and the vernacular, two or three branches of mathematics, several social studies, a number of sciences, philosophical, military, and vocational branches, and a variety of polite accomplishments. The number, variety, and necessarily superficial treatment of the many studies was a general characteristic of realist education.

New methods came in with the new subjects. Languages were to be taught by direct methods, by conversation and by composition. Travel,

observation, demonstration, and the early beginnings of the laboratory facilitated new methods. Botanical gardens, cabinets of minerals, pictures, drawings, maps, globes, and instruments were introduced. Because better methods were used and the children actively engaged in doing things in school, the discipline became milder.

Realism was partly but not wholly an upper class movement. The English academy was a middle class school, Comenius and Mulcaster were concerned with the vernacular education of the common people, and the vocational education of mechanics was proposed by several realists. The Reformation and Counter-Reformation had laid emphasis upon the vernacular languages for the common people; and this emphasis was greatly increased by realism. Thus the realist movement of the seventeenth century gradually affected almost every phase of education, but the classical schools and the universities were still the dominant institutions. These long resisted the new influences.

2. A HUMANIST WITH REALIST LEANINGS

Early in the sixteenth century the Spanish scholar Juan Luis Vives (1492-1540) urged the study of nature, and accepted the principles of utility and practical application as criteria for judging education and life. To modern languages, he assigned a place in the curriculum along with the ancient. He proposed two devices, the use of notebooks for lists of words, idioms, and eloquent passages, and, secondly, the method of double translation from the foreign tongue into the native speech and back again. The Englishman Roger Ascham, who recommended the same two devices, may have obtained these ideas from Vives.

Vives was one of the few great humanists who was also versed in modern tongues. He knew Spanish and French and was acquainted with Flemish and English; and in this interest in the vernaculars he was not alone, for the famous Spaniard Antony de Lebrija had prepared the first Spanish grammar and dictionary in 1492, the year of Vives' birth. When children go to school, Vives declared, they are to speak in their own tongue, not in Latin. It is the duty of mother and teacher to preserve a pure native language.

History and geography were to be taught as means of developing practical understanding and knowledge of public affairs. The school histories, Vives held, should not emphasize war but rather the arts and achievements of civilization. Modern history should be emphasized, not only the history of the great states but also that of the smaller progressive nations. Like Erasmus, he was interested in the problem of international peace.

In his psychology, Vives struck out along new lines. The senses are our

first teachers and sight is the chief of the senses. Children vary widely in capacity, in ability to observe and distinguish, in intelligence and judgment, but also in persistence and power to pay attention, and in mental vigor and energy. Some children are notable for skill with the hands as in painting or weaving. Some of these ideas he may have read in his favorite Quintilian and he certainly found there the thought that we can best discover the nature of children by watching them at play. The psychological principle for which Vives is best known is the Greek doctrine of association. He said: If two ideas occur together then at a later time the less important one will tend to call up the more important. He dealt also with forgetting and ascribed it to physical conditions, to imperfect understanding, and other features. The teacher should help the pupil recall what has been learned, by teaching the connections between ideas, by the use of surprise and wonder, by means of rhymes, and by serial arrangements. In Vives, we have some of the elements of an educational psychology, and he also anticipated Bacon and the inductive method of science. His ideal school or academy was to be a public institution, and education was to be extended to boys and girls. He prepared a highly successful book of school dialogues or colloquies somewhat like those of Erasmus, Cordier, and Castellion. In this little schoolbook, he incidentally threw much light upon the educational conditions of his time.

3. REALIST UTOPIAS

The Utopia of Thomas More had little to say about education but it contemplated having all men learn both a trade and the art of agriculture; and it declared that the Utopians "have all their learning in their own tongue." Industrial education and the use of the vernacular by scholars were proposals characteristic of realism. Other realist utopias of the early modern period were the *Christianopolis* by John Valentine Andreae (1586-1654), the *Nova Solyma* of Samuel Gott, the *Commonwealth of Oceana* (1650) of James Harrington, and the *City of the Sun* of Thomas Campanella (1568-1639). Campanella was an Italian Dominican who got into difficulties with the Spanish government and the Inquisition and wrote his book in prison. The political features of the *City of the Sun* are drawn from Plato, but in his educational views Campanella was a realist and an encyclopedist. His city was to be equipped with gardens and collections of all kinds. The walls and public buildings were to be covered with pictures, maps, diagrams and illustrations of the mechanical arts and various instruments, with portraits of their inventors and of other historical figures. He anticipated the idea of the planetarium. Such devices, together with specimens of all created things and all human constructions, were to be

used in the education of the young. Education started at birth, but children began to study the sciences at the age of six and this was followed with instruction in the practical arts. The city was opposed to narrow specialization and favored instead an encyclopedic and more general knowledge and training. In regard to languages, however, the reverse of this policy was in force. The citizens held that, although languages must be studied, they need not be studied by all; they may be assigned to a sufficient but small number of specialists. In this utopia, each citizen worked four hours a day, and the rest of the time was to be spent in "learning joyously" and in other recreations. Special attention was given to industrial education, and even the officials and rulers had to be skilled in the physical sciences and practical arts.

England in the seventeenth century had a number of minor writers, such as Samuel Hartlib, John Dury, and William Petty, who gave expression to new ideas on vocational education. Hartlib was not English. He was a Polish merchant living in London and was bent upon the establishment in his adopted city of an institute for physical investigation. This project made him the center of the group which invited Comenius to England. It is important to notice that this was just before the Royal Society was started. Hartlib's *Description of Macaria* was a utopia in which all children, both boys and girls, were taught industrial occupations and agriculture. He proposed a national bureau of vocational guidance and employment, an idea much discussed in his day and again in ours. John Dury, inspired by Hartlib, wished to have trades taught to the common people and science to the future scholars, while William Petty of the same circle proposed a college for the highly skilled occupations. He named a dozen of these skilled trades including the manufacture of scientific instruments. Petty also had advanced notions on vocational guidance. All of these writers exhibited other realist tendencies as well. Dury, in the *Reformed School*, declared for object teaching, for the use of the mother tongue, and for an encyclopedic curriculum. Proposals for industrial education also cropped up in Germany and some actual schools were opened in the following century.

4. JOHN MILTON ON EDUCATION

The little book, *Of Education*, by John Milton (1608-1674), which was written at the request of Samuel Hartlib, is as famous for its prose as for its proposals. It is usually criticized on the ground that it makes extravagant demands upon the pupils, and Milton admits that his program is not "a bow for every man to shoot with that calls himself a teacher." And yet the English academies carried out nearly all that Milton recommended al-

though much of it was done superficially. Milton's own education at St. Paul's, at Cambridge, and in private study at home was rounded out, as the custom was, with a period of travel. There is no sufficient reason to raise a doubt about his statement that he met Galileo in Italy. Upon his return, Milton taught a school which is described in Edward Phillips' life of the poet. It was during that period that he wrote *Of Education*.

In this little tract, Milton insisted that good teaching must begin with sensory ideas; and that the sole function of language is to convey ideas. "Though a linguist," he wrote, "should pride himself to have all the tongues that Babel cleft the world into," it is only through the information and wisdom which these languages transmit that he becomes learned and wise. Languages should be learned through oral instruction in an easy book and by extensive reading. What languages? He named Latin, Greek, Hebrew, Chaldec, Syriac, and Italian. He did not mention French and he noticed English only incidentally. He proposed to have the beginning student of Latin read the opening chapters of Quintilian, and thereby learn about education and the Latin language at the same time.

Milton's realism is further shown by the extensive and varied course of study, from arithmetic and geometry learned as games, "the easy grounds of religion," and Bible stories to navigation, architecture, and fortification. Writing in the midst of the civil wars, he had the education of soldiers in view and proposed daily exercises in the use of weapons and instruction in tactics. Like Vives, he was a humanist as well as a realist and did not neglect social and aesthetic studies. Poetry and the drama, history and political oratory were to be studied. Again like Vives, he proposed a special institution which he called an academy and which was to be both school and university, educating boys to the age of twenty-one.

5. THE ENGLISH ACADEMIES

At the Restoration (1660), when their clergy were driven from their positions and their youth excluded from the universities, the Puritans established their own schools for secondary and theological education and these they called academies. The first was established at Sheriffhales (1663) in a spacious manor house with close-clipped lawns and ancient trees. Not many of the academies could afford such beautiful homes, but otherwise the first was typical of the seventy or eighty such schools which were established later. They were generally small, enrolling from twenty to fifty students. Without endowment, they depended upon fees for their support.

Sheriffhales may be taken as an example. The founder, John Woodhouse, had studied at Cambridge and was a family chaplain when the Act

of Uniformity silenced him in 1662. He conducted the academy for thirty-four years until 1697 when it was closed because of his advanced age. Like others of these private schools, its success depended mainly upon the principal. The course of study occupied four years and included three ancient languages, English, and a wide range of subjects to be followed by some professional work in law, anatomy, and theology. While much use was made of textbooks and lectures, there were practical exercises in surveying, dissecting, constructions, debating, and other activities. There was a close connection between the academics and the Scottish universities. The Scotch and the Puritans were dissenters and realists. Excluded from Oxford and Cambridge, many academy students attended northern universities, where after a residence of a year or longer they obtained a degree. In their preference for the English language as the means of instruction instead of Latin, the academics and the Scottish universities further resembled each other. Charles Morton, who later came to America and was vice-president of Harvard College, made this change by using English in his teaching at his academy at Newington Green in 1680. This was several years before the German University of Jena took a similar step. Philip Doddridge at Northampton Academy and the noted ethical teacher Frances Hutcheson, at the University of Glasgow, changed to English in 1729. This phase of the realist movement, the driving out of Latin by the vernacular as the language of schools and universities, was, of course, a very important change.

Newington Green under Morton was progressive in other ways. His academy had a form of self-government where the pupils in a school republic legislated for themselves. Others of the academies also became centers of democratic politics where future Whigs received their early training in public affairs. Many of the dissenters sympathized with the American Revolution and later with the French Revolution. Among these was Joseph Priestley, who like Charles Morton came to America. Many manufacturers and businessmen of the north of England sent their sons to the academics, so that sometimes half the students were preparing for a business career. But the Puritans could not adequately support the schools. Some were closed, others became secondary schools, and a few were transformed into higher institutions. Manchester Academy became Manchester College of Oxford University. By 1820, when the somewhat similar institutions in the United States were in their prime, the great era of the English dissenting academy was over.

In Germany, a religious movement known as Pietism paralleled the English Puritanism and had a somewhat similar influence upon education. August Hermann Francke (1663-1727) became the leading Pietist school founder. Near the end of the seventeenth century, he established at Halle

a group of institutions known as the Halle Foundation. It included a vernacular school for poor children, a Latin school for the middle class, and a science school for nobles. To these, a school for teachers was later added. At the time of Francke's death, his schools had more than two thousand pupils. The distinguishing feature of all the schools was their realist curriculum. They provided cabinets of minerals and of natural history, a chemistry laboratory, and a workshop for wood and glass. One of Francke's teachers was Christopher Semler (1669-1740) who planned a realist secondary school; and, in a pamphlet of 1739, he described his proposed school, calling it a *Realschule* or Realist School. A few years later, in 1747, a clergyman, Julius Hecker (1707-1768), who had been a pupil in Francke's schools, established such a school in Berlin. In this six-year school, instruction was given in three languages, German, French, and Latin, and in mathematics, drawing, history, geography, human anatomy, mechanics, and architecture. There were also some vocational classes. Schools of this type were gradually opened in other cities. They prospered and in the nineteenth century the courses were extended to nine years; and these new *Oberrealschulen*, or Higher Realist Schools, were accepted as one of the major types of the official secondary school system of Germany.

6. MODERN SCIENCE AND PHILOSOPHIES

Twenty-five years (1518-1543) will cover Magellan's circumnavigation of the globe, the new astronomy of Copernicus, and the new anatomy of Vesalius. Such achievements might lead one to assign the rise of modern science to the early decades of the Reformation period, but the real power of science was not understood until the following century.

In the seventeenth century, science came to be recognized as an international and cooperative enterprise. The first great scientific societies were founded in that century in Italy, England, France, and other countries. The *Accademia dei Lincei* (that is, of the *Lynxes*) was founded in 1603 at Rome by G. della Porto (1541-1615), a prolific but not very original writer on physical science. Of this body, Galileo was a member; and some pupils of Galileo founded the *Accademia del Cimento* (experiment) at Florence in 1657. The Royal Society of London began somewhat casually but by 1660 it had developed into a well-organized association of scientists and it was chartered in 1662. Similar was the early history of the French Academy of Sciences, founded in 1666. Under the leadership of Leibnitz, a royal academy was founded in Berlin in 1700. In informing scientists of work already done or in progress and in calling attention to new problems, the publications of these associations were invaluable.

A deliberate effort to define scientific method developed. Two of the pioneers in this field were Francis Bacon and René Descartes. In his definition of the inductive method, Bacon insisted upon observation, experiment, and the industrious collecting of facts, but he did not sufficiently emphasize the importance of ideas, insights, and happy guesses as guides to investigation and to generalization. Mere labor alone, however unsparing, will not produce science. Genius is demanded and those investigators are most successful who are most adept in raising significant, answerable questions. Although Bacon did not see this clearly yet by his literary power he did much to stimulate interest in discovery and in calling attention to the practical value of scientific knowledge.

While Bacon demanded experiment and new discoveries, Descartes called for incontrovertible proofs which he sought by rational and mathematical methods. Descartes' *Discourse on Method* (1637), his *Rules for the Direction of the Mind*, and his *Search after Truth by the Light of Nature* are examples of a whole class of psychological and educational books. Locke wrote one which he called the *Conduct of the Understanding* (1706), and recent examples of the same class are sometimes entitled "How to use your mind" and "How we think." Descartes reduced his method to four "rules" somewhat as follows:

1. Accept as true nothing that it is possible to doubt.
2. Analyze every statement into its simplest elementary propositions.
3. Review each of these elementary propositions one by one.
4. Make your final enumeration so complete that nothing shall be omitted.

Descartes was impressed by the success of mathematics in finding indisputable proofs of its propositions and took the mathematical methods as his ideals in scientific investigation. But, although he was keenly aware that the senses may lead us into error, he did not neglect inductive and experimental work. He carried out dissections and was deeply interested in the work of Harvey and of Gilbert.

Scientific method is a compound of induction and deduction. Induction begins with some question and proceeds by observation and experiment. Deduction begins with an assumed or a demonstrated truth and draws its necessary implications. The proofs of elementary geometry are the handiest examples of deduction. Both induction and deduction are likely to involve unrecognized assumptions which may introduce errors into the conclusions. Every natural science seems to depend for its new matter upon observation and induction, while necessary inference and deduction supply proofs of its general principles.

An example of scientific method which involved both the Baconian and the Cartesian elements together with a description of the progress of his thought had already been furnished by Copernicus who published his *De Revolutionibus Orbium Coelestium* in 1543. In the dedication of that work he explained how he had obtained his results. He said that (1) he became dissatisfied with the growing intricacy of the Ptolemaic theory; (2) he studied all previous views; (3) he proposed to himself a new and simpler theory; and (4) by observation and calculation he proved that his theory accounted for all known facts. A simplified account of his method might read about as follows: "When I had thought long on the traditional views concerning the paths of the heavenly bodies, it seemed to me lamentable that no better explanation had yet been proposed. Then I read the writings of the ancients and found that some of the Greeks had held that the earth moves about the sun and turns upon its axis. Gathering confidence from these suggestions, I conceived that I as well as they should have liberty to propose a more satisfactory theory of the motions in question. I then assumed the motions which I describe in the present work, and after careful investigation extending through years, I found that if the movements of the other planets were referred to the motion of the earth in its orbit about the sun all their observed phenomena can be satisfactorily explained and that a simple and harmonious system is the result. In accordance with this theory I have drawn up the plan of my work." He had kept the manuscript of his book not for nine years as Horace recommends but for thirty-six years before he decided to publish it.

The invention of new instruments to aid observation, manipulation, and measurement was a third development in seventeenth-century science. Lenses were known to Archimedes, but spectacles seem to have been made in Italy about 1289 and the telescope was developed in the Netherlands about 1600. Leeuwenhoek with a simple microscope discovered bacteria. Galileo who made good use of the telescope is said to have occasioned the invention of the compound microscope. Huyghens (1629-1695) invented an improved eyepiece. He also invented the pendulum clock although Galileo in 1582 had used the pendulum, kept swinging by hand, to measure small intervals. The barometer, air pump, and thermometer are other instruments of the same period. Mathematical inventions of the same time were decimal fractions, logarithms, better symbols and notations, the analytic geometry of Descartes, and the calculus of Leibnitz and Newton. All these had much to do with the rapid development of science and its proper applications.

For the history of science one must go to special books, and there are now many good ones; but a few names will provide a little orientation. We have already mentioned William Harvey who discovered the circula-

tion of the blood in 1616 but did not publish his complete results until 1628. Two famous microscopists, Malpighi and Leeuwenhoek, demonstrated the capillaries which Harvey had been unable to see; and Leeuwenhoek, with his keen sight and manipulative skill, figured the blood corpuscles and many forms of bacteria and protozoa. Harvey, with a simple lens, made contributions to embryology and developed the doctrine that each individual begins as a fertilized egg. Thomas Sydenham who followed the principles of Hippocrates in tracing the natural history of diseases had John Locke for an assistant and pupil. Sydenham is sometimes regarded as the founder of modern clinical medicine.

The contributions to physics and mechanics were equally notable. William Gilbert in his *De Magnete* (1600) founded the new science of electricity. The genius of Galileo was shown, as Lagrange pointed out, not so much by his work in astronomy which needed only a telescope and industry but by his discoveries in mechanics. Near the end of his life, he published at Leyden a book, *Two New Sciences*, in which he announced the laws of falling bodies and the pendulum, determined the component motions of a projectile and its parabolic path, and described other experimental discoveries in dynamics, statics, and hydrostatics. The foundation of modern chemistry were laid by Robert Boyle who defined "element" as an irreducible substance, thus distinguishing between elements and compounds. Boyle also experimented on electricity and on the physiology of respiration. He is best known for his law that gas pressure and volume vary inversely. In the seventeenth century, the new mathematics which was needed as a scientific tool was supplied by Napier who developed logarithms, by Descartes, Leibnitz, and Newton whom we have already named, and by many lesser men. The work of Newton on light and gravitation was the crowning achievement of science in this period.

Although we shall be anticipating the developments of several centuries, it will be useful to indicate here some of the influences which the sciences gradually exerted upon education. The first was that the sciences themselves were included in the curricula of schools. Many sciences were introduced into the realist schools of the seventeenth century, although unfortunately they were usually taught from books. Secondly, the methods were gradually improved. Collections of minerals and of instruments such as the air pump, barometer, or prism were shown and demonstrated. Later on, laboratory demonstrations were given by the teacher, and still later the students were asked to carry on experiments. Observation and field excursions were used early, but the student laboratory was not common until the nineteenth century. The scientific method of discovery, somewhat after the manner described by Copernicus, was recommended by Rousseau as a method of teaching and was so employed by Pestalozzi and

later teachers. Problems and projects were introduced not only in science but in other fields also. In the third place, science aided the improvement of the physical plant and the equipment of schools and provided the basis for the study and practice of hygiene, home economics, agriculture, and other practical arts and vocations. Fourthly, beginning with the inductive psychology of Vives and Locke, natural science furnished the model and some of the tools for a science of education, which began to develop in the present century. Finally, the greatest effect of science upon education came from its influences upon the spirit of the school. It made education more inductive and investigative and less authoritarian and memoriter. These changes, however, came slowly, and are not yet by any means complete or universal. We shall come across them again.

7. EDUCATION FOR STATESMEN AND MEN OF AFFAIRS

One result of the advancement of science was that a strong current of optimism was generated. This is felt in the views of the scientists and philosophers as well as in those of the educators whose task demands an optimism which, however, it does not always help to generate. Descartes and Bacon, Locke, Comenius, and the utopists were all optimists and prepared the way for the "theory of progress" in the following century. The sciences, said Descartes, should not be acquired singly like a skill or an art. All the sciences are merely applications of human wisdom or brains to the facts of nature; and they are so interconnected and so based upon a common foundation that they may all be acquired together instead of attacking them one at a time. Reason, it seemed to Descartes, is evenly distributed among men and by his method, which we noticed above, anyone should be able to arrive at the scientific truths of nature. Bacon also thought that a good method would enable anyone to become a scientist and even a discoverer. Most of the great educators show the influence of the same current of optimism. This applied especially to Comenius but also to the most influential of all English writers on education, John Locke.

John Locke (1632-1704) was a man of the council table rather than the study, prudent and skillful rather than scintillating. Known for his genial friendliness, he was equally noted for self-restraint and ability to hold his tongue. In that period of violent party strife, Locke was the confidential agent of Lord Shaftesbury. The same Dr. Fell of Oxford, whose unpopularity is still an unsolved mystery, celebrated in the stanza,

I do not like you, Dr. Fell,
The reason why I cannot tell;
But this I know and know full well,
I do not like you, Dr. Fell,

was commissioned to spy upon him and set traps for him; but he was completely baffled by Locke's reserve and caution. In his *Some Thoughts Concerning Education*, Locke urged that children should early be taught to guard their speech.

Although Locke was not a man of the study, he wrote many books, and this in spite of the fact that he devoted much of his time for twenty years to a single one, the *Essay Concerning Human Understanding*. It is little of an exaggeration to say that Locke applied only his spare time to composition and that most of his works are occasional writings, called out by the practical demands of the hour. Even the titles, the *Essay*, noted above, the *Letters on Toleration*, *Some Observations on Printed Money*, or *Some Thoughts Concerning Education* show that many of his works were tracts for the times.

Born near Bristol, Locke was the son of a country lawyer who was a Puritan, who sent him to Westminster School and to Oxford. He became a lecturer in his college and his connection with the university lasted for thirty years, although much of this time he was not in residence. Like Milton, he had a highly unfavorable opinion of current education. What he thought of the English Public Schools is clear from his *Thoughts*. The scholastic course was still in vogue, and he sometimes wished that he had never gone to the university; but in that case we might never have heard of him. Oxford, with all its defects, was the making of him.

The bent of his mind is clearly shown by his early studies. In a fragment on the art of medicine, he wrote down this principle: "True knowledge grew first in the world by experience and rational observation; but proud man, not content with the knowledge that he was capable of, and which was useful to him, would needs penetrate into the hidden cause of things," and even presumed to lay down his own laws which nature is to follow. In his Oxford period, Locke joined a chemistry club for which Boyle secured a lecturer from Germany. Anthony à Wood, another member and later a political opponent, reported that Locke would not take notes quietly like the rest but was "always prating and troublesome." This may simply mean that Locke's practical mind was "content with the knowledge that he was capable of" instead of attempting to "penetrate into the hidden causes of things" as the alchemists tried to do. Locke was graduated a bachelor of medicine and sometimes prescribed for patients but, owing to difficulties with the university authorities, he never secured his final medical degree.

Returning from a diplomatic mission to Brandenburg in May 1666, Locke resumed his work in Oxford. That summer, through some medical services, Locke made the acquaintanceship of the Earl of Shaftesbury. He was to serve for many years as secretary and as adviser in the education of

the children and later the grandchildren of this patron. He was elected a Fellow of the Royal Society, which brought him into the circle of "the incomparable Mr. Newton." A mutual friend was Robert Boyle, who chose Locke as his literary executor. A question raised in a social group about this time started Locke on the composition of his *Essay Concerning the Human Understanding*. The question was, what is the mind capable of knowing; and in developing his answer he came to consider psychological and logical questions and earned the reputation of being one of the founders of modern psychology as well as of a new species of philosophy, the critical philosophy which was carried forward by Berkeley, Hume, Kant, and later thinkers. The *Essay* occupied him intermittently for twenty years and appeared in the bookshops early in 1690. For the manuscript, upon which he had worked so long, he received thirty pounds.

Two periods of foreign residence, first in France where he had charge of a pupil about 1675 and later in Holland, broadened Locke's experience of life. In France, he translated but did not publish the moral essays of the Jansenist, Pierre Nicole. This must have brought him close to the sphere of activity of the Abbé Fleury. Lord Shaftesbury wrote to Locke to inquire what books were used in the education of the dauphin, one of whose tutors Fleury was. We must mention this educator more particularly because of the likeness between his views and those of Locke. Claude Fleury (1640-1723) wrote a *Treatise on the Choice and Method of Studies* which includes an early, perhaps the first, account of the history of education. It was, however, written to outline and defend a utilitarian course of study. Although it was finished in 1675, it was not immediately published. Locke was in France, during these years, but there is no evidence that the two authors met. Perhaps the explanation of the close similarity of their views is that both were influenced by Descartes, by Port Royal, and by the contemporary conditions in England and France. Be that as it may, Fleury's *Treatise* came out in 1686, shortly before Locke's *Thoughts Concerning Education*. Five editions of the *Thoughts* appeared in Locke's lifetime and a great many afterward. The first French translation (1695), by Pierre Coste, reached at least five editions. Besides the Dutch version (1698) mentioned by Locke in a preface, the book was also translated into Swedish, German, and Italian, and no doubt other languages.

Nor did the author dismiss the subject after the book had appeared but, as new editions came out, he added here a paragraph and there a page to the earlier text. This manner of composition explains the repetitions, digressions, and badly constructed sentences that one occasionally finds. There are also some deviations from Locke's usual good sense. But its merits were so great that we should not dwell on its imperfections. And it was influential. Much of the philanthropist movement of the eighteenth

century was in harmony with Locke's views, and he was read in the nineteenth century as well.

The educational optimism of the century was shown by Locke in the first paragraph of the *Thoughts*. He declared that men are, at least nine parts out of ten, formed by education rather than by heredity. This might mean that the school can make of a man what it will just as a river at the source could easily be turned in a direction other than the one which it has taken. As we have already noted, this view of Locke and others that the nature of men can be changed by education gave rise to an optimism in regard to society which was to lead in the succeeding age to a well-defined theory of progress.

Four principles form the foundation of Locke's educational doctrine. These may be named the principles of utility, of rationality, of practice or conditioning, and of direct experience; they will be discussed in this order. Early in life, Locke prepared a short guide to conduct which would have delighted Benjamin Franklin. A man's proper business, he wrote, is to seek happiness and avoid misery. The most lasting pleasures come through health, reputation, knowledge, doing good, and the hope of eternal happiness. "In life," he added, "I must carefully look that it cross not any of those great and constant pleasures above mentioned." In again considering the aims of life and education in the *Thoughts*, he included health, virtue, practical prudence, courtesy, industry, and knowledge. Virtue is here the greatest and controlling aim and in defining it Locke announces his principle of rationality. He wrote: "As the strength of the body lies chiefly in being able to endure hardship, so also does that of the mind. And the great principle and foundation of all virtue is placed in this, that a man is able to deny himself his own desires, cross his inclinations, and purely follow what reason directs as best, though appetite lean the other way." This is the cornerstone of Locke's theory. He believed, with Descartes, that a man's reason can control his desires and stormy emotions and bring to a peaceful and rational end the conflict which otherwise rages between the good and evil forces of his inner life.

The ability to reason originates early in life and should be cultivated from the first, according to Locke; but, although it begins early, it develops slowly and therefore children must for a considerable time be directed by adults. Before the child can be permitted to make his own choices, at least in difficult cases and on weighty occasions, he must be conditioned, as the psychologists say, to make the right choices. And the right choices are those approved by reason. Conditioning or training in good habits is Locke's third principle. As Locke in one place put it, children are not in the right way until they take delight in laudable things. Claude Fleury, who held the same view, declared that he who can make pleasant what

it is desired that children shall do will have discovered the great secret of education.

By example, by repetition and constant practice, through praise and blame, rewards and punishments, said Locke, good habits are to be formed and the moral law made clear, easy, and palatable. It is, therefore, necessary that children shall be brought up in a good society. This is the basis of Locke's attack upon schools with their "herds of unruly boys"; and of his fear of the evil influence of vicious servants. "Children," he wrote, "are not to be taught by rules which will be always slipping out of their memories. What you think necessary for them to do, settle in them by an indispensable practice as often as the occasion returns," and even make occasions. Until children can reason and will follow reason, even though desire lean the other way, they must be habituated, trained, and conditioned to good and right conduct.

Both wisdom in practical affairs and good manners are best learned by experience. This is Locke's fourth principle, and he applied it chiefly in moral education. The world is full of cheats, follies, and faults, and to be forewarned is to be forearmed. This experience of the world must be carefully guarded so that the child may learn the true state of an evil world and may become a good judge of men without becoming corrupted. Knowledge of the world of men is to be given through this guarded experience; but Locke proposed to give knowledge of the physical world also through sensory experience, knowledge of countries and customs through travel, and skill in fencing and dancing and in the use of tools through practice and participation. This is an important principle, but Locke did not make as much use of it as some other realists. In geography and science he did not propose, as on his principles he should have done, to take children into the field.

Health is treated first in the *Thoughts*. His advice was mainly hygienic and was directed to the development of a strong constitution. He gave attention to diet, exercise, clothing, sleep, and good health habits. His main idea is the Spartan one of hardening and inuring the body to overcome any tendency to weakness and effeminacy. To the attainment of health and the moral and practical qualities, Locke devotes two-thirds of his book. In one of the most important sections, the ninety-fourth, he said: "The great work of a governor is to fashion the carriage and form the mind; to settle in his pupil good habits and the principles of virtue and wisdom; to give him little by little a view of mankind, and work him into a love of imitation of what is excellent and praiseworthy; and in the prosecution of it, to give him vigor, activity, and industry. The studies which he sets him upon are but as it were the exercises of his faculties, and employment of his time, to keep him from sauntering and idleness, to teach

him application, and accustom him to take pains, and give him some little taste of what his own industry must perfect." Information can be obtained as needed. "But of good breeding, knowledge of the world, virtue, industry, and love of reputation, he cannot have too much; and if he have these he will not long want information." And yet he devoted one-third of his space to school subjects.

In the selection of these studies, he followed his utilitarian principle, keeping his eye upon his main object, the education of a gentleman. The attaining of knowledge depends for a motive upon curiosity which is an "appetite" for knowledge and which is to be carefully fostered in children for it is "the great instrument of nature for overcoming the ignorance they were born with." We must encourage their questions and answer them truly and seriously. Children are travelers just landed in a new country and we who are old residents should be helpful to them.

When a child is able to talk it is time to teach him to read, and this may be done playfully with ivory letters and some easy, pleasant book. Writing should follow reading and should be begun soon afterward. He thought shorthand might be worth learning by young gentlemen. After English, French and then Latin were to be taken up. Languages should be learned by a conversational and nongrammatical method. Grammar should be taught only after a great deal of progress had been made in the languages; and Latin themes, verses, and the memorizing of long passages were to be omitted.

Arithmetic is recommended for early study because it offers the "easiest sort of abstract reasoning" but also because it is useful. Geography and astronomy are to be presented as mathematical subjects. The Copernican system is favored as the simplest and also the likeliest to be true. Geometry should follow, and the first six books of Euclid are enough for a gentleman. In every subject we should begin with what is simplest and plainest and should consider carefully what the child is capable of understanding. Many subjects were included in the scheme, history, rhetoric, logic, ethics, civil law, and biblical history. Greek he thought unnecessary for a gentleman. Music he condemned because it wastes so much of a young man's time. Dancing, fencing, and a trade were to be taught. He named several suitable trades, but he favored gardening and carpenter work. From such occupations were to be derived exercise, recreation, and a practical understanding of working conditions, and also knowledge and experience which would be useful when the boy himself became an employer. The last period, when the boy was fairly mature, was to be spent in foreign travel with a tutor. Locke himself had served as the traveling tutor of a boy whom he directed through France.

Finally, he advised parents to consult their own reason in planning the

education of their children rather than to follow old custom merely. In the *Thoughts* he did not deal with the education of the working class, but we know from other documents that he would have offered them only meager schooling. He dealt with a somewhat special subject, the education of an English gentleman, and he dealt with that subject, not exhaustively but comprehensively. The distinctive quality of Locke's educational doctrine is not only its common sense and cool realism; it is that he saw men as the sculptor sees them, "in the round," as physical, intellectual, social, practical, moral, political, and religious beings. Education was to enable men to live well in all these dimensions.

8. THE LANGUAGE QUESTION

Educators in the seventeenth century were more conscious of language than ever before or since. The ancient Greeks studied only one language their own; the Romans in the classical period added Greek to Latin, but by the fourth century Greek was again disappearing from the schools of the West; and the schools of the earlier Middle Ages were conducted in Latin and taught no other language. With the Renaissance, we came into a new era. The classical Latin took the place of the medieval Latin and fifty years later Greek was reintroduced. With the development of biblical investigation, Hebrew also was added, and trilingual colleges flourished at Salamanca, Paris, and Louvain. Meanwhile, the vernaculars were taught in the new elementary schools, and modern foreign tongues began to knock at the doors of academies and municipal schools. Obviously there was a language question. The languages tended to monopolize a curriculum which was at the same time hard pressed to admit more mathematics, history, science, and other subjects including several practical arts. The realists offered various suggestions including the following: limiting the time for languages and devoting the rest of the school time to other subjects; teaching fewer languages, omitting Greek, and of course Hebrew which was never widely taught; concentrating on languages as tools and omitting literature; using supposedly more effective methods of language teaching such as conversation, extensive, easy reading, careful selection of the vocabulary, and various crutches like interlinear translations or having the teacher translate instead of the pupils. The writers who dealt with the subject did not confine themselves to it, and to the greatest of them Comenius, the language question is only a detail in a complete system of educational philosophy.

Vernacular schools had become far more numerous since their first appearance in the Middle Ages; and the church used the vernacular to teach the catechism and Bible, but usually only to the poor and to those who

would receive no further schooling. In the seventeenth century the civil and practical advantages of vernacular education came to fuller recognition. Educators such as Ratke and Comenius, Peter Ramus of France who wrote a grammar of the French language, a few Spaniards already mentioned, and several prominent English educators argued vigorously in favor of the vernacular.

Among the English reformers of language instruction was Richard Mulcaster (1530-1611), who was headmaster of Merchant Taylors' School for twenty-five and of St. Paul's for twelve years and to whom we are indebted for a prophetic work on the teaching of English, *The First Part of the Elementarie which entreateth Chieffie of the right writing of the English Tung* (London, 1582). He demanded that all children should be taught reading, writing, drawing, singing, and playing an instrument. With such a foundation, he declared that he could teach the boys in the grammar school more Latin in four years, between twelve and sixteen, than they could have learned without it in ten years. One of Mulcaster's chief interests was the improvement of the English language. He urged the preparation of an English dictionary and prepared a word list to aid in stabilizing English spelling. This was his list of the eight thousand most frequently used English words. He also proposed to reform the English universities and to establish in each a college of education.

Other English masters of the period who had the same concern were Brinsley and Hoole. John Brinsley (c. 1570-c. 1630) in his *Ludus Literarius or the Grammar Schoole* (London, 1612) expressed his conviction that boys should learn good English before undertaking Latin; and he insisted that the Latin school must take care to preserve and extend skill in the mother tongue. Too often, he declared, Latin was allowed to crowd out the English so that boys came up to the university unable to read and write their own language. And Charles Hoole (1610-1667), "Master of Arts and teacher of a private grammar school in Lothbury Garden, London," devoted a whole section of his *New Discovery of the Old Art of Teaching School* (London, 1660) to the teaching of English.

The most distinguished of the immediate predecessors of Comenius was Wolfgang Ratke (1571-1635) who was educated in the Johanneum in Hamburg, the school that Basedow later attended. Ratke's grandiose plans won the support of Prince Ludwig of Anhalt-Köthen who had founded the "Fruit-Bearing Society" for the purpose of improving the German language. Ratke favored the High German of Luther's Bible as the national speech and insisted that it must be taught first, before Latin. His plan for teaching the elements of Latin did not succeed, and Prince Ludwig withdrew his aid from the school. Ratke read the plays of Terence over and over with his class, both in Latin and in translation, but they

still could not read Latin because they had been merely passive listeners. He proposed to develop a science of education which he intended to base upon psychology and upon an analysis of the subjects that were to be taught. He argued that the government should support the schools because of their great social and political importance. Of Ratke's influence we shall speak later. Comenius, who is one of the world's great educators, also dealt with the language question, but only as one element of his broad and profound conception of education.

9. THE MASTER KEY TO UNIVERSAL EDUCATION

John Amos Comenius (1592-1670), a Czech and a Moravian, was one of the great system builders in education. He came from the lower middle class—his father was a miller—and did not attend secondary school until he was sixteen. This late beginning is supposed to have forcibly directed his attention to the methods employed in teaching languages, about which he had a good deal to say. One of his teachers in the university at Herborn was the celebrated J. H. Alsted (1588-1638), from whom he acquired ideas on the scope and organization of the sciences. After a year at the university of Heidelberg, he became first a teacher, then pastor, and later bishop of the Moravian churches. The Thirty Years War began just when he became pastor at Fulneck which was in the path of the invading armies. The little city was sacked, its people massacred, his wife killed, his library and manuscripts destroyed, and Comenius was driven into exile in Poland. There he taught in the gymnasium at Lissa. By that time his writings had already brought him a European reputation; and he was invited (1641) to come to England to serve as the head of a projected college of research. This scheme miscarried, and Comenius accepted from the Chancellor of Sweden a commission to prepare textbooks for the Latin schools of that country. During those years he lived in Elbing and also taught in the gymnasium of that town. About 1650 he was called back to central Europe to reform the schools of Sáros-Patak, but after several years, when warfare again broke out in that region, he retired to Amsterdam where he continued to write to the end of his life.

Comenius produced about a hundred and seventy works, large and small, some in Czech and others in Latin. In the field of education, he wrote schoolbooks and works on theory. His most important theoretical work was *The Great Didactic* (1628) or "the art of teaching all things to all men," that is, the master key with which to unlock all educational doors. Three years later he published the first of his language books, the Latin textbook, *Janua Linguarum Reserata* (1631), the open door to the languages. We shall consider the language texts first. The idea for the

Janua came from Elias Boodin. A book of the same kind prepared by William Bateus, a Spanish Jesuit, was in wide use; but when Comenius issued his *Janua* it swept all similar books off the boards. It was used in the schools of Europe for three centuries.

This famous textbook was based upon eight thousand common Latin words arranged in sentences. The sentences are simple in the beginning and become progressively more difficult as we proceed through the book. Each page in a parallel column gave also the vernacular translation of the Latin. Connectives and other structural words were repeated, but each basic word was used only once. Verbal illustrations of the grammatical constructions were given. The book had a hundred chapters and told the story of the earth, man, and the divine government of the universe. The topics included the creation of the world, the heavens, the elements, the earth and its minerals, its plants, and its animals, man his body and his mind, the mechanic arts, social institutions, the various branches of knowledge, and the providence of God. The book, as we have said, became extremely popular but it had two serious defects. It was as dry as a dictionary and like a dictionary it used each word only once. To acquire the complete vocabulary, it would have been necessary to commit it to memory.

The rest of Comenius's textbooks were built upon the same plan as the *Janua*. The *Vestibulum* was to precede the *Janua*, which had proved too difficult for beginners; and the *Atrium* and *Palatium* were to follow the *Janua*. The *Thesaurus* was a reading book made by culling extracts from the great Latin writers and was the most advanced book in this series. Lexicons were to be provided. The books were to be read and read again, the *Vestibulum* ten times over, until they were practically memorized.

The *Janua* and his other schoolbooks reveal another element in Comenius's educational philosophy. He believed that the correct way to build a curriculum was to follow the spiral plan as it was later called. By this plan even the small child was to receive instruction about nature, man, and God, and all the topics named from the *Janua*. As the child grew and entered upon a more advanced stage the same round of topics was treated again but more fully and more penetratingly—and so on stage after stage. This plan of providing instruction in every department of knowledge at each period of growth was known as pan-sophism or encyclopedism.

On his visit to Sweden, Comenius had agreed to prepare the textbooks demanded by the chancellor for the schoolboys of that country. It was in November 1642 that he settled down in Elbing for that purpose, but he found it difficult to devote his whole time to the work. He had a patron, de Geer, who provided assistants, and Elbing was a quiet town by the sea. But the difficulties of his exiled brethren and his propaganda for church

union, the union of all Protestants, constantly diverted his thoughts from the schoolbooks. The town council of Elbing persuaded him to teach in their Latin school four times a week. Although they paid him, that did not reduce the extent of the interruption. In 1645 he had to attend a religious conference called by the King of Poland. It was not until 1647 that the schoolbooks were about completed, together with the *Methodus Linguarum Novissima*, the newest language method. The best way to keep a language pure, he declared, is to found societies for this purpose such as the Fruit-Bearing Society (*Fruchtbringende Gesellschaft*) at Weimar. He did some practical work in this field by bringing out a Germany dictionary.

The Hungarian Count Rakoczky invited him to organize a school at Sáros-Patak where he arrived in May 1650. The count agreed to build a schoolhouse with classrooms and boarding facilities and to furnish a printing press together with equipment and the staff to operate it. To arouse popular interest in the plan, Comenius delivered some public lectures on educational topics, and published his *Sketch of the Pan-Sophic School*. Owing to the death of his patron in 1652 the plan, which included a seven-year course, was not put into full operation, yet he carried on the school and the printing establishment, and got out new editions of his schoolbooks. And, most important, he prepared for the beginners at Sáros-Patak the most celebrated of all his works, the *Orbis Sensualium Pictus* (1657), the world of the senses in pictures. There were one hundred and fifty lessons on all subjects in the pan-sophic manner. Each lesson was illustrated. The text below the picture was in parallel columns, Latin in one and a translation in the other. Reference numbers helped the child to link the word with the pictured object.

The *Orbis Pictus* was immediately successful. The English version, for example, was made by a famous teacher, Charles Hoole, whose preface is dated, "From my school in Lothbury, London, January 25, 1658," less than a year after the first issue. The *Orbis Pictus* was neither altogether original with Comenius nor was it the first illustrated schoolbook; and its pictures were rather rough wood-cuts. But it had so many good qualities that it was introduced into schools in most of Europe and remained in use for a long time. One hundred years after its first introduction Goethe, telling the story of his childhood, wrote: "No libraries for children had at that time been established. The old people themselves still had childish notions, and found it convenient to impart their own education to their successors. Except the *Orbis Pictus* of Amos Comenius, no book of the sort fell into our hands; but the large folio Bible, with copper plates by Merian, was diligently gone over leaf by leaf."

The *Schola Ludus* was also written at Sáros-Patak. And while the *Orbis Pictus* may be called a much simplified and an illustrated *Janua*, this new

work, the *Schola Ludus*, was the *Janua* dramatized. Unfortunately, Comenius was not a dramatic genius and the book had no success; but it merits brief description for it shows one of the ways in which he tried to put a leading idea to work. This Latin "play school" book had eight dramatic pieces presenting the whole pan-sophia, the physical world, man, work and workers, the family, state, church, and other institutions, thus forming, according to the subtitle, a living encyclopedia. The parts which were to be taken by schoolboys symbolized elements of the physical world, social world, mankind, and so on, and the purpose of the plays, as of the *Janua*, was to teach at one and the same time the Latin tongue and the whole round of knowledge. But Comenius saw other values also. On the school stage the pupils were to learn manners, carriage, and self-assurance in facing the public, all of which he considered of great use in preparing them for life. And, further, these plays were intended to attract parents to the school. The successes of their children would please them, he thought, and would dispose them to pay school fees more willingly. In a preface Comenius traced the history of the book and offered his dedication to the school board of Sáros-Patak. Though the ideas had merit, the work was dramatically lifeless and had no success. But the other schoolbooks of Comenius formed one of the chief means by which he influenced education.

The other means by which Comenius exerted influence was through *The Great Didactic* and other works on educational theory. To give a full account of the philosophy of Comenius would require many pages, but we must constantly remember that he was a Christian minister and a Neo-Platonist and that, although no scientist, he was much influenced by the scientific activities of his time. He compares our whole life to a school; the world was created to serve as the training ground of the human race. Through man's failures, darkness and confusion have entered this school, but harmony and order may be restored through the cultivation of the understanding and the application of true knowledge. Mankind, he said, anticipating later theories of progress, has already passed through six stages and we are now entering upon a seventh, that of pan-harmony in which the whole world will be enlightened. To accomplish this, there would be needed universal books, universal schools, a universal language, and an academy of science drawing its members from all the world. Education for Comenius was not a matter of learning this or that; it was the means to redeem mankind from the evils which made life worthless and unbearable.

There have been few works of educational theory as systematic and comprehensive as *The Great Didactic*, or that have claimed as much. Here is set forth "the whole art of teaching all things to all men," making them learned, virtuous, and pious. This claimed to be the master key to universal education. And this is not to introduce anything new into human nature.

The "seeds" of learning, virtue, and piety are implanted in all men by nature. Let us first take learning or knowledge. Man is *naturally* capable of acquiring a knowledge of all things. His senses and his reason are given him for this purpose. Comenius stands in awe of "the marvelous wisdom of God" who was able to contrive the brain of man which is able to receive and retain the impressions and images of a lifetime. Similarly, the seeds of virtue and piety are equally a part of the original nature of man.

A skeptic might be inclined to ask why, if it is "natural" for man to grow learned, virtuous, and pious, the world so often goes begging for those qualities. The answer of Comenius would not be different from the one which Rousseau actually gave, that conditions, society, and the schools have been so bad that the "seeds" have had no chance to sprout and grow. Some of the defects of schools in the past have been that they have excluded the common people, have used poor methods, have taught words merely and not real knowledge, and have been cruel institutions for stuffing and flogging children rather than teaching them. We must build up good schools, "true forging-places of men." He gave no bad definition who called man the teachable animal, but a man must be actually taught and taught well if he is to develop true manhood. All men need education, the clever and the stupid, the rich and the poor, that they may become men. There is in the doctrines of Comenius no ground for class education; to him education is an elemental human need, not a privilege. Schools must be universal and open to all. Girls as well as boys are to have a thorough education and one that shall be suitable to their duties in life.

Man can be most easily formed in youth while he is plastic and before the labor of adult life begins. Indeed, God has given man a long period of immaturity for this purpose. It is the long period of plasticity and growth that enables the child to become a man. This doctrine of Comenius is a surprising anticipation of a corollary to the doctrine of evolution which John Fiske developed under the term "the meaning of infancy."

All studies are to be taught to all children, for Comenius is an encyclopedist, but not all can be fully mastered. Much can be done by applying to teaching the principles of which we find constant examples in nature. By applying these principles, Comenius believed that sure, easy, quick, and permanent learning may be attained. The principles were such as the following: Nature observes a suitable time; Nature prepares the material before she gives it form; in all operations of Nature, development is from within; Nature proceeds step by step without a break. These are four of the nine principles which deal with the certainty of learning; and there are similar groups dealing with ease or facility, permanence, and rapidity of learning. Altogether he considers thirty-seven principles of na-

ture which are to guide our teaching. From them we are advised as follows: to teach what will be useful in life; to appeal to the senses and understanding rather than to the authority of books; that studies must not only be understood but must also be impressed upon the memory; that studies must be carefully graded and organized, that it is useful to have pupils teach other pupils for we learn nothing so well as what we teach to others.

Lest the student should think that these pages of *The Great Didactic* are devoted wholly to abstract discussion, we quote one of the finest passages, one that might have been written by Vittorino or Vives. Comenius wrote: "The school itself should be a pleasant place, and attractive to the eye both within and without. Within, the room should be bright and clean, its walls ornamented with pictures, portraits of celebrated men, geographical maps, historical plans, or other ornaments. Without, there should be an open place to walk and play in, for this is absolutely necessary for children, as we shall show later, and there should also be a garden attached, into which the scholars may be allowed to go from time to time, and where they may feast their eyes on trees, flowers, and plants. If this be done, boys will, in all probability, go to school with as much pleasure as to fairs, where they always hope to see and hear something new."

A golden rule for teachers is that everything should be presented to the senses, and to several of the senses, whenever possible. Sensation is the foundation of knowledge and there is nothing in the understanding that was not originally derived from the senses. The senses also are the most trusty servants of the memory and we always remember what we have first tasted, heard, or seen. The anatomy of the human body can be remembered better from a single dissection than from reading exhaustive volumes. If objects are not at hand, pictures or models may be used. The arts should be taught by practice. We learn to carve by carving, to dance by dancing, to write, talk, reason, by carrying on these activities. In this way schools will become workshops, humming with activity. Rules and theory are essential, but they should follow and not precede observation and practice.

Languages are tools and only those languages which are necessary tools should be learned. But languages may be tools for different purposes because they may be used to arouse emotion, to stimulate speculation, to convey fact and information, or to lead us in the conduct of life itself. And yet Comenius, in agreement with all the realists, does not value language largely for its beauty of phrase or as a vehicle of noble emotion but chiefly as the carrier of information. For this function the mother tongue is most important, then the languages of neighboring nations, and then Latin. Only specialists will need other languages. Languages and concrete knowledge of fact should always be learned together. Some languages we must learn to speak, but of others a reading knowledge is sufficient.

And we must not let the languages crowd more necessary subjects out of the course of study.

Knowledge, virtue, and piety are the three great ends of education. Virtue and piety should be taught by the practice of virtuous and religious acts but also through example and through reason. The Bible should rank above all other books in Christian schools; and Erasmus has shown, said Comenius, that it is suitable for children of all ages.

The plan of school organization which Comenius advised is one of the most striking features of his program, for he proposed to develop a one-class society or rather he assumed that such a society already existed. He planned a complete system of education for all children of every rank and class. There were to be four periods of six years in this system and a school corresponding to each period; the school of infancy for the first six years, the vernacular school from six to twelve, the Latin school from twelve to eighteen, and the college of research from eighteen to twenty-four. Instead of this democratic plan, Erasmus accepted the dual system, with one school for the lower classes and another secondary-university sequence for the directing classes. Two hundred years after Comenius wrote his *Great Didactic*, the American democracy undertook to develop a single-track scheme in which all schools were to be open to "all the children of all the people."

A chapter in the *Great Didactic* is given to the school of infancy or, as the Germans translated the idea, the mother-school. About the same time Comenius wrote a separate book which he called *The School for Little Children* (1633). This anticipated Pestalozzi's manual for mothers and also foreshadowed the kindergarten of Froebel. Everywhere, but here especially, Comenius revealed his kindly nature and his sympathetic observation of little children. He gives sensible advice on the care of their health and their safety. A healthy child is God's most precious gift to the home. Childhood should be joyous, and whatever promotes innocent joy should be given to children. Fables, stories, and songs are highly desirable; and children must play with other children. Natural objects, toys, tools, and a garden should be provided. Lessons and all learning must be made pleasant and the parents should prepare the child for school by showing him that school is a happy place. The encyclopedic curriculum appears in the plan of the school of infancy as well as in that of the more advanced schools.

10. INFLUENCE OF RATKE AND COMENIUS

Recently the democracy of Comenius has been out of fashion in several countries especially in Germany where race, and autocracy were in the

saddle and rode mankind; but forty or fifty years ago the name of Comenius was honored the wide world over and especially in Germany where, in 1891, a Comenius-Gesellschaft was founded to study his work and to spread his views on popular education. Even in the seventeenth century both Comenius and Ratke had considerable influence in several German states. Ratke's influence was most evident in the Weimar ordinance of 1619; and that of Comenius in the school programs of Saxe-Gotha, Brunswick, Hesse, and other German states and cities.

Ratke's patroness was the Duchess Dorothea Maria of Weimar who provided for the introduction of his principles. The school instructions which were drawn up in 1619 instituted compulsory attendance the year around, except for four weeks in harvest, between the ages of six and twelve. This seems to be the earliest example of a compulsory attendance requirement by the civil authority. The school day was kept short, only four hours, and a long recess was allowed between classes. Corporal punishment was forbidden. Each pupil was to have his own book and each teacher his own classroom. The German language was to be thoroughly taught before the Latin was taken up. These were Ratkean ideas.

Duke Ernest, called "the Pious," of Saxe-Gotha (1601-1675) took another step toward a common school, in which the influence of both Ratke and Comenius may be seen. Duke Ernest was the son of Dorothea Maria of Weimar, and as advisers in the reform of the schools of his duchy he called first Sigismund Evenius, a moderate Ratkean, and then Andreas Reyher, a friend of Evenius and a disciple of Comenius. Others of his advisers show the same influence. Reyher was made rector of the gymnasium at Gotha. His instructions of 1641 began the reform and were in part copied in the ordinance of 1642, known as the Saxe-Gotha School Method.

Pietism was strong in Gotha, religious teaching was emphasized, and the clergy were appointed school visitors. Nor was this a mere form, for the local pastor was to visit the schools several times a week and to keep a list of all children between the compulsory attendance ages of five and twelve. In the year when Gotha adopted these requirements (1642), Massachusetts passed a law which was intended to achieve similar ends. By the age of twelve, the children in Gotha were expected to read German, repeat the catechism and Bible verses, report the main heads of a sermon, write legibly, calculate accurately, and sing, at least in chorus. A public examination of all children who were about to complete the course was held to determine whether they might be excused from further attendance. Two points are noteworthy: this was an example not of civil control but of state and church cooperation; and the objectives of the school were stated in terms of achievement and not formally in terms of years.

Reyher also prepared a *Brief Text Book* (1657) which followed Comenian lines. This dealt with four main topics, natural objects, useful knowledge, political and social duties, and domestic affairs. The code of 1642 was amended to include these realist topics in the course of study. The first part deals with the heavens, the earth, minerals, plants, and other subtopics. In the third part, we have the introduction into school-education of home geography, a German curriculum idea which was later taken up by Rousseau and given an observational and inductive turn. A new edition of this code, the Saxe-Gotha Method (1672), emphasizes observation of actual things, school experiences, and visits to farms and to the local court sessions. Duke Ernest also established continuation classes and improved the school equipment. His peasants, it was said, were better educated than the princes of other lands.

Next to Saxe-Gotha the old city and territories of Magdeburg show most clearly the direct influence of Comenius. Its school code of 1658 established a four-level school system, each level comprising six years. The Comenian textbooks were used and Comenian aims were professed. Other states also introduced Comenian ideas, but almost everywhere the traditional humanism was still too strong for the new realism. Yet the doctrines of Comenius were here and there kept alive and his textbooks remained in use until Basedow and Salzmann developed a new realism in the following century.

The definition of realism, as of other historical movements, depends upon the standpoint occupied by the one who defines it. It may be regarded either as a broader humanism or as a reaction against humanism. Prominent realists occupied each of these positions. It was the result of the early efforts to introduce science and practical arts into education, to rationalize methods of teaching, and to base education upon direct experience. Realist education appealed especially to skilled workmen and to those who employed skilled workmen, the landlords and manufacturers. But there was also a fringe of aristocratic realists who outlined the education of gentlemen, men of affairs, military leaders, and even princes. At the other extreme, were realists like Mulcaster and Comenius who urged universal vernacular schools. The realists, therefore, proposed the transformation of the schools of all levels and for all classes.

Realist education was generally characterized by a broad curriculum, involving twenty or thirty subjects, including history and geography, the sciences, the modern languages and sometimes Latin, several polite accomplishments such as dancing or fencing, a trade, and a period of travel. Those with less money would have to omit some of these features. The realists developed new methods. They taught languages through translations, or other semidirect methods such as Ratke's. They introduced illustrative materials and tried to base their teaching upon actual experience. Where possible they attempted to follow the method of science in the process of discovering new scientific laws. The Copernican method

of discovery and the Cartesian method of proof began to influence instruction. In England the various inductive processes came to be known as the Baconian method.

Locke and Comenius were doubtless the most influential realists. Locke employed the principles of utility, rationality, conditioning, and direct experience; and his aims were health, virtue, practical sense, courtesy, industry, and "learning," that is, knowledge. Of these he considered learning both last and least; but he devoted more than half of his *Thoughts* to learning.

The master mind of Comenius attempted to fashion the master key of universal education, or to create the art of teaching all things to all men. Like all the realists he was an optimist, and his *Great Didactic* was an unconscious utopia, although an inspiring one. The noblest of his many noble conceptions was that of a one-class society and a ladder system of universal schools. The world of his day was not worthy of him; and, indeed, we still have to look forward to glimpse the Comenian goal.

QUESTIONS

1. Why did realism appeal to pupils who were not reached by humanism?
2. Illustrate the statement in the text that "words are things," and will repay careful study. Using the Oxford English Dictionary, trace the history of the word "academy."
3. What relations can be made out between the new psychology and philosophy and the new methods of teaching?
4. Why were the seventeenth-century leaders optimists and authors of utopias?
5. Why did both Puritans and Pietists lean toward realism?
6. Why has modern science been more successful than Greek science? Name several ways in which the two movements and the conditions surrounding them differ.
7. What is meant by saying that Locke proposed an all-round education? How, in this respect, does Locke's scheme differ from medieval education? Compare it with the ancient Athenian plan.
8. Why, if the realists had the whole truth, do the problems of language teaching, language learning, and the use of language occupy so large a place in educational discussion in all ages?
9. Compare the spiral plan of Comenius with the similar scheme of the Moslem schools. Can you find any similar plans today?
10. How can we, as Comenius proposed, "follow nature" in education? This topic is of special importance for we shall meet it again in connection with Rousseau and other educators.
11. How influential was Comenius and in what ways?

FOR FURTHER READING AND STUDY

Many new and original educational plans, both utopian and practical, mark the transition from humanism to realism, and several of these are included in the present list. Some of the writings of the period, for example, those of Hartlib, Petty, Dury, and Ratke, have been left out because no convenient editions are available, but selections from these and others may be found in Henry Barnard's *American Journal of Education* (Hartford, Connecticut, 1855-1881). Barnard's *Journal* is indexed. Nearly all of Milton's *Tractate* and passages from Montaigne and Fénelon are included in Painter's *Great Pedagogical Essays* which is entered below.

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9

NEW VIEWS OF NATURE
AND HUMAN NATURE

THE EIGHTEENTH CENTURY IS CALLED THE AGE OF REASON, but it was also an age of benevolence, toleration, and political democracy, partly because these attitudes were considered reasonable but also in response to humane feeling. It was a humanitarian age which attempted to abolish slavery, to reform the prisons and the criminal law, to alleviate the miseries of the peasants, to educate the blind and the deaf, and to deal with children both kindly and intelligently. In the political sphere, events led to democratic revolutions in America and France. In literature, the century turned from classicism to romanticism and produced the novels of Richardson and the *New Héloïse* of Rousseau; and in religion, the spread of pietism and the rise of Methodism belong to the history of this hundred years as truly as Voltaire, Frederick the Great, and the French Encyclopedists. It was an age of faith and hope as well as reason. Even the skeptical rationalists had a faith, a new confidence in the power of reason to solve all problems and to bring in the millennium, faith in progress and the perfectibility of man and society.

Rationalism held that the world is entirely subject to natural law and ruled out everything supernatural and all revealed religion as contrary to the uniformity of nature and to natural law. The only kind of religion that was acceptable to the rationalists was some form of deism or natural religion which made no use of any special revelation. In politics, rationalism opposed autocracy and the divine right of kings and supported what were considered the natural rights of the individual, such as the rights to life, liberty, and the pursuit of happiness, as Jefferson stated them in the Declaration of Independence. The comparable catch words of the French Revolution were liberty, equality, and fraternity. The common term here is liberty, and the eighteenth-century rationalists held that all individuals must have the liberty to do whatever would not interfere with a like freedom on the part of others. This doctrine of *laissez faire* or noninterference was applied in economics by Adam Smith, the physiocrats, and

others. It was not without influence in education. And the rationalists also tended toward utilitarianism, holding that nothing had any right to exist which could not demonstrate its present usefulness.

Education was less developed than politics or religion. The schools for the common people, where they existed at all, were narrow in their subject matter, formal in teaching methods, and harsh in discipline; and the Renaissance secondary schools were plainly decadent. The educators of the time were developing new interests in health and physical education, in science and the study of nature, in the use of the senses and the effort to teach pupils to think for themselves, and in the practical arts by which materials are made fit for human use. But the prophets of the new day were not well received and new practices were carried out in only a few schools and by small groups of innovators.

These innovators began to consider the nature of immature children and to adapt their teaching to the growing child, an idea which Comenius had begun to explore in the previous century. They attempted to determine the stages of mental development and to fit methods and materials to these stages. These efforts to base education upon child psychology, which are marked in Sulzer and Rousseau, reached a high point at the beginning of the following century in the attempt of Pestalozzi "to psychologize education." It was Pestalozzi also who tried to use the school to reform society and improve the lives and the living conditions of the common people. Finally, because of the growing nationalism of the eighteenth century, leaders began to see in the school an instrumentality for making the nation strong and great. But such ideas developed only gradually, and several of the leaders with whom we shall deal in the present chapter tended to take a cosmopolitan rather than a national attitude.

1. JOHN GEORGE SULZER

The intellectualist trend of the century showed itself more in John George Sulzer (1720-1779) than in the other educators whom we have mentioned. In Zürich, where he was born, he came under some of the same influences which shaped the youth of Pestalozzi. As a school reformer, he worked in Germany, where he became one of the savants attached to the court of Frederick the Great. His first book, *The Essay on the Education and Guidance of Children* (1745), is noteworthy for its emphasis upon child psychology. Sulzer divided childhood and youth into six stages. His plan included sports, work, manual skills, science by observational methods, and great attention to the development of accurate knowledge, clear concepts, and true judgments. To try to think without accurate knowledge, he said, is to attempt to erect a building upon insecure foundations. This emphasis

upon thinking and the large place that he gave to mathematics, "A lordly science," he called it, reveal his rationalism.

He was also a realist. This is indicated by his broad curriculum at all stages but especially in the adolescent period. He wanted pupils to be given a certain amount of free time in which, with some guidance, they were to plan and carry out work of their own selection. At the age of fourteen, one-third of the day was to be given over to student-planned school activities. In his political attitudes, Sulzer was a cosmopolitan rather than a nationalist. This does not prevent him from proposing public tax-supported schools for the education, in common and without regard to social class, of all children from six to sixteen. The student will see that Sulzer, like Locke and Comenius, anticipated Rousseau in important respects

2. SENSATIONIST PSYCHOLOGY

Locke derived ideas from two sources, sensation and reflection; but Etienne Condillac (1715-1790) made reflection a product of sensation. The mind, according to him, is the product of sensation. But he did not draw the inference to which this doctrine would lead, namely, that the mind is completely determined from the outside. On the contrary, he declared his belief in the freedom of the will. Nor did he attempt to train the senses of the young Prince of Parma, whose tutor he was. The principle of training the senses was accepted by Rousseau, who did not follow Condillac's psychology, and more generally by the contemporary teachers of the blind and deaf. These teachers began to develop practical means of training the senses of their pupils. On the one hand, they invented raised print and taught the blind to read it, and on the other taught lip reading and vocal speech to the deaf. France was the leader in both fields and the first schools were opened there by Valentin Haüy for the blind and the Abbé de l'Épée for the deaf; but other countries were not far behind. Roderigues Pereira (1715-1780), a famous teacher of the deaf, drew pupils from great distances to his school in Paris.

The sensationist doctrine was accepted by Helvetius (1715-1771), who held that men are entirely formed and controlled by outside forces. This means that education, in the widest sense, is all-powerful, which is what Helvetius actually taught. Morality, he believed, is mere custom; and self-interest, founded upon the love of pleasure and the fear of pain, is the only effective motive of conduct. As evidence of the state of opinion in "enlightened" circles in the Age of Reason, we may quote the remark which was current at the time that "Helvetius merely said what everyone believed but was afraid to say." Rousseau opposed this deterministic view.

3. JEAN JACQUES ROUSSEAU

The educational doctrines of Locke were quickly carried to many countries by translations of his works and by schools founded upon his views; but their most inspired interpreter was Jean Jacques Rousseau (1712-1778). Contrary to the opinion sometimes expressed, he was much more than an interpreter of Locke. Rousseau differed from Locke at vital points and he added not only his style and enthusiasm but wholly new ideas to Locke's educational views. His system still influences a great many educators and, properly interpreted, would have value for others. The critical study of Rousseau is very necessary today when a current philosophy of education is based partly upon his ideas. To such a study, Rousseau himself invited us in the preface to the *Émile* where he said: "When I freely express my opinion, I have so little idea of claiming authority for it that I always give my reasons, so that you may weigh and judge them for yourselves; but though I would not obstinately defend my ideas, I think it my duty to put them forward, for the principles in which I differ from other writers are not matters of indifference; we must know whether they are true or false, for on them depends the happiness and misery of mankind." This invitation should be accepted by all young students of education for there is no better opportunity to cut one's philosophical eyeteeth.

Rousseau not only invited the reader to criticize him; he also provided some of the means to carry forward the critical process. He admits his debt to Locke and points out where he parts company from his master. Where Locke had discovered the individual with his personal traits, Rousseau discovered the child with its childhood traits. Some of the traits which he seemed to find were negative, namely, the lack of moral concepts and of the power of abstract thought; and others were positive, such as the ceaseless activity, trustfulness, curiosity, and interest in concrete problems which young children show; but the greatest difference between the child and the adult is that the former is growing while the latter is, at least relatively, mature. Education is growth may be taken to be the most important conclusion of Rousseau. Study the child, he commanded, for you may be sure that you do not know him. In the *Émile*, he attempts to study the child introspectively by recalling his own childhood and that of other children whom he had known and by forecasting the condition and development of his imaginary pupil, Emile, in specified situations. Rousseau had several short—short because unsuccessful—experiences as a tutor. He did not make systematic observations or psychological studies of real children and, except for a few observations by Pestalozzi, by the young duke of Württemberg, and by a few others, his call for such studies

went unheeded for many years. In writing on education, he was greatly influenced by his own experiences; and since his experiences had often been unsatisfactory, his advice on the whole is: Do the opposite of what is customary and you will nearly always be right. Evidently Rousseau meant to be a radical reformer, and he was one. Describing his childhood, he wrote: "Tedium drove me at an early age to books. At six I happened to light on Plutarch; at eight I knew him by heart; I had read all the romances; they had drawn from me floods of tears before the age when the heart has awakened an interest in romance. From this source sprang my taste for the heroic and romantic, which has never ceased growing to the present time, and has ended by blunting my taste for everything which does not resemble my day-dreams."

We may grant that this early addiction to such books was a bad beginning for his education; but we do not therefore need to go to the opposite extreme and to say with Rousseau that children should have no books of any kind before the age of twelve. A better selection of books and a less sentimental use of them would seem a reasonable alternative. There is also the question whether he could have been turned into the active, playful lad which he desired *Emile* to become. Perhaps Rousseau's dreamy and romantic imagination was the cause of his sentimental reading and not the effect of it. Throughout we must keep in mind that it is such a man who wrote the *Emile* and that, in spite of what he says in his *Confessions*, he supposes other people to be like himself.

In his celebrated *Confessions*, Rousseau has told the story of his life with great frankness, although not always correctly. He was the second son of a citizen of Geneva, the early capital of Calvinism. His mother died in giving him birth and this he called the first of his misfortunes. The father was temperamentally unfitted to care for his sensitive, neurotic child, and neither he nor an uncle to whom Jean Jacques was committed at the age of ten paid sufficient attention to the boy. While Jean Jacques was still with his father, the two frequently sat up all night reading tear-filled novels until, at the approach of dawn, the father sent the son to bed with the confession that he was the more childish of the two.

Rousseau's extraordinary talents received little systematic cultivation. For two years he was given some instruction in "Latin as well as all the insignificant twaddle" which goes by the name of education. A little later he had some tuition in drawing and the elements of geometry. He learned no vocation by which to gain self-support and a settled position. The resulting insecurity deeply affected his view of life. He attempted many sorts of occupations, etcher, lackey, secretary, tutor, music teacher and copyist, composer, dramatist, until finally at thirty-eight he became a successful writer. Before that time his philosophy had become fixed.

The want of a healthy family life had a similarly unsettling effect upon him. Never as child or man did he have a real home. We have seen the circumstances of his childhood. In his youth he was apprenticed to an engraver who mistreated him, although not without provocation, and he ran off wandering through the valleys of Savoy, intoxicated with the beauty of nature. From childhood his heart responded to natural beauty and his love of flowers and trees made him an enthusiastic amateur botanist. He developed an interest in many sciences but never acquired a close or accurate knowledge of any. It was only popular or salon science.

We shall not follow closely his journey after he left Geneva. It was marked by adventures, slight hardships, and at least one exhibition of utter meanness. Being employed as secretary to a lady of quality, he stole a ribbon and, when he was questioned, he put the blame on an innocent servant girl who thereby lost her position and probably, said Rousseau, had a hard time getting another. Nor does he attempt to excuse or explain this dastardly act. Almost immediately after leaving Geneva he had renounced his Protestant faith for Catholicism in return for food and the hope of further support. To establish him in his new religion, he was sent to Madame de Warens, who was however more deist than Catholic. He lived with her for a dozen years but was finally drawn to Paris by the idea of selling the plan of a new musical notation which he had developed. Nothing came of this but he made friends who helped him to earn a precarious livelihood. At thirty-two he took as his mistress Therese Levasseur, an ignorant servant girl, by whom he had five children. One by one these were all, against the tearful protests of the mother, committed to the orphan asylum.

Rousseau claimed to have felt endless remorse for these evil deeds, but the main explanation that he gave was that it would have been inconvenient to care for the children. In the case of the stolen ribbon he gave no explanation whatever. The fact is that present pleasure, or even a mere whim, bulked larger in Rousseau's conduct than the sense of duty or justice.

He was employed for about a year (1741) as tutor to the two small sons of M. de Mably, provost of Lyons, and wrote an account of his plan for his employer. This account shows that he was attempting to follow Locke and Montaigne, whom he read as early as 1737. The experience convinced him that he was unfit for the work of a teacher. He had an irritable temper and the unhappy faculty of getting on bad terms with his pupils. In the *Confessions*, where the whole story is told, he reported that, with patience and temper, he would have succeeded but wanting these qualities his pupils profited little. There is no doubt, however, that this experience gave him a permanent interest in questions of education.

On walking tours through France, he observed the oppression, the

unjust and exorbitant taxation, and the poverty of the peasantry. The evils of his adopted country made him cherish the memory of the one he had given up and at the age of forty-two he returned to Protestantism in order to reclaim his rights as a citizen of Geneva. From this he received little practical advantage, for he was not permitted to live there for any long period. During much of his life, he suffered from a painful and incurable disease and in his latter years his mind became seriously unbalanced. Both church and state condemned his works and persecuted their author; but he also developed a persecution complex so that he accused his friends, one of whom was David Hume, of taking part in conspiracies against him. He died in 1778, on an estate which a friend had made available to him, eleven years before the outbreak of the French Revolution which he had foreseen.

Rousseau had many faults and was also the innocent victim of great misfortunes. His theory of education was his proposal for realizing his ideals for the individual and for mankind. The conflict between his life and his ideals is important because the faults of his life are sometimes charged against his teachings. So bad a man cannot be the author of good doctrines or wise policies, it is said. But this does not follow and cannot be defended as a principle of interpretation. The life may frequently explain how he came to hold certain views and may teach us to examine those views very critically. The facts to notice are that he was a man alienated from all the stabilizing institutions of society, without a country, without a real home or a settled vocation, and also without good health or sufficient self-control. The true principle of interpretation is that the theory shall be judged by its tendencies and results.

4. ROUSSEAU AS A WRITER

Rousseau first came into general notice in 1750 through his prize-winning *Discourse on the Sciences and Arts*, written in answer to a question set by the Academy of Dijon: Has the revival of learning led to purer morals? In this discourse, he maintained that culture and learning had made men luxurious and effeminate, to the prejudice of military qualities and moral virtues and to the neglect of their duties as citizens and parents. "I would as soon," said a wise man, "that my pupil spent his time in the tennis court for there at least his body would have been exercised." What should we teach children? This important question has an easy answer: Let them be taught what they are to practice when they are men, not what they ought to forget. His second *Discourse* (1754) on "The origin of inequality among men" did not win the prize but was much better reasoned than the first. He concluded that in a state of nature men were more equal than

they are under civilization and that education greatly increases the natural inequality between men. This greater inequality is a positive evil, because it leads to slavery on the one hand and oppression and domination on the other. Both of these essays deal with the reform of society which he held to be easier than the reform of education in a bad society. The reform of society was to be accomplished by a return to a state of nature. The idea of a state of nature was not invented by Rousseau, and he doubted that such conditions as others imagined had ever existed. He therefore supplied his own content and made his idea of the state of nature into an ideal. What was the content of this ideal? While he sometimes speaks of "the noble savage," he did not contemplate a return to primitive or savage life. The state of nature which he desired was a simple farming community or state without the evils which he ascribed to large cities, corrupt rulers, social classes, and luxury. Such an ideal was shared by others including, it would seem, Thomas Jefferson.

In addition to the early discourses, the works of Rousseau which demand the attention of students of education are the *Discourse on Political Economy* (1755), the *New Héloïse* (1761), the *Social Contract* (1762), the *Émile* (1762), and the *Considerations on the Government of Poland* (1773). Of these only the *Émile* deals with education as the main subject. The *New Héloïse* incidentally considers family education but announces no ideas which are not found also, often expressed in similar words, in the *Émile*; and both books urge that education should, if possible, be carried on in the family and by the parents. The other three works named, the *Political Economy*, the *Social Contract*, and the *Government of Poland*, have passages dealing with state or public education.

5. ROUSSEAU ON PUBLIC EDUCATION

Rousseau proposed two complementary systems of education. His opposition to the autocratic state and luxurious society of his day and his poor opinion of the condition of family life, especially among the great, together with his proposal to return to an ideal state of nature led him to consider the two schemes: the one is a system of public and national education which he would apparently prefer if a state fit to carry it out could be found; the other is the private, individual education of the *Émile* which was to prepare the "natural man" to live as well as possible in the artificial society which characterized the eighteenth century. We present first his argument for public education.

Good public education can exist only in a good state; and a good state can be maintained only by good education. So said Plato; and so Rousseau also said. The great nations of the world no longer attend to

this, he declared, and, indeed, there appear to have been only three examples of effective national education in all history: Crete, Sparta, and ancient Persia. In the good state, the people must rule; and the primary law of popular government is that all must obey the general will. The distinguishing characteristic of the general will is that it establishes justice and virtue; and it demands that the individual wills shall conform to the general will. It is not enough to say to the citizens: Be good; they must be "taught to be so by patriotism and by example." By example, for courage should be taught by soldiers and justice by judges. And by patriotism, for education must give the souls of the people a national form and must so shape their opinions and tastes that they become patriots as much by inclination and passion as by necessity. We must teach them, nay compel them, by education to love their country, its land and life and liberties. Begin at birth. After egoism has been allowed to develop it will be too late to begin. A child ought to look upon his fatherland as soon as his eyes open to the light, and should continue to do so till the day of his death. He must live only for his country. National education is the privilege of free men who must be educated in schools that are common and public. This further requires that our country shall show herself the common mother of all her citizens. No patriotism without liberty, no liberty without virtue, no virtue without citizens; create citizens and you have everything you need. This is Rousseau's ideal of a national education. He nowhere develops a complete system and he shows plainly that he has no concern for the lower classes, the peasants, and the poor. Like Plato in this, he is similarly pessimistic about the possibility of establishing such an education. This pessimism led him to develop an elaborate program for individual education which is found in the *Émile*.

6. THE *Émile*

In form, the *Émile*, a work of five hundred pages in five books, is a story or romance with four chief characters: *Émile*, the boy who is being educated; *Sophy*, to whom most of the fifth book is devoted; the tutor; and Rousseau himself, who moves through these pages explaining, expostulating, eulogizing. Although Rousseau advised the simple life of the poor, *Émile* was supposed to be chosen from the upper classes. "The poor man," wrote Rousseau, "has no need for an education; for his condition of life forces one upon him, and he would not be able to receive any other." But if a young nobleman is educated, there will be one man more, one knave less. Book one deals with the two years of infancy, book two with the child to age twelve; book three considers the youth approaching adolescence with rapid strides in the years from twelve to fifteen and book four

the adolescent from fifteen to twenty. Toward the end of the fifth book Sophy, after being educated or rather trained, is married to Emile with the intimation that they will live happily ever after.

Implicit in the work as a whole is the doctrine of the culture epochs, that is, it implies that the natural stages of individual growth and education run parallel to the stages of the growth of human civilization. The child on this theory begins life in a state of nature and in twenty years becomes a social individual just as mankind, in twenty or forty centuries, has progressed from a state of nature to a highly organized and cultivated society. Thus from the history of man's cultural evolution, which Lessing called "the education of the human race," hints and principles may be drawn for the education of the individual. Later in this book we shall see that other writers continued to use the idea of the culture epochs.

With the contrast between a state of nature as a simple society and a corrupt unnatural society we are now familiar. But in the opening lines of the *Emile*, where Rousseau declares that "everything is good as it comes from the hands of the Author of Nature" and that evil results from the perversion of Nature, he uses the word nature in a new sense. Here he means by nature, not a simple social order, but the inherited traits and abilities of the child. He means that the child's original nature is good and pure. But since the child is immature and unable to care for himself, education is necessary. The task of education is to preserve the child's goodness and purity without stain from the world and to provide the conditions in which it may grow and mature. The contrast now is between the good individual and evil society.

As the work proceeds, and especially in the third and fourth books, the author gradually introduces the notion that a good society is, at least theoretically, possible and that such a society would also be natural. He had already approached this concept in the *New Héloïse*, where he described a harmonious family, and in the *Political Economy and Social Contract*, where he imagined a social order in which popular government and conditions of simple living, equality, and liberty characterize the natural society. We now have three uses of the word nature by Rousseau: the state of nature, the natural but fully developed man, and the natural civilization. But the latter two are thought of not only as conditions but also as goals, the goals of education which are accepted in the *Emile*. Then Rousseau falls into the common fallacy of personifying nature. Nature lays plans and would have things be other than they are. Finally, like everybody else, he also uses the word to designate the external world. We should keep in mind, as we read Rousseau, these distinct uses of the word. Even if we are not always able to distinguish the sense of the word because Rousseau is not always clear, it is well to be forewarned.

The idea of a rational, universal nature which includes humanity played a controlling part in the Stoic philosophy and was introduced into English thought by Hobbes. In France the physiocrats, a group of economists, based their system upon the same idea of a law-abiding nature which included society. A brief examination of this theme will show how much Rousseau was indebted to the ideas of his time. The leading physiocrat, François Quesnay (1694-1774), was writing about the time when Rousseau started to compose the *Émile*. Quesnay's theory rested upon the law of nature which governs human nature and the structure of society and which is discovered by the light of reason. It is a law of nature because, like the law of gravitation, for example, any attempt to violate it merely serves to illustrate it. The natural law, Quesnay said, gives everyone the right to the property which is produced by his labor. By the gift of nature each individual has abilities which enable him to produce goods; and in a just society, that is in a society which is based upon natural law, these goods are guaranteed to the producer. The first duty of society is to teach its members the laws of nature but Quesnay does not set forth a curriculum. Quesnay also held that agriculture is the only source of real wealth. Anyone familiar with his doctrines will see in reading the *Émile* that Rousseau's teaching on property and his favorable attitude toward agriculture, as well as his ideas on nature, were colored by the theories of the physiocrats. We now turn to the text of the *Émile*.

Education begins at birth and the nurse is the child's first teacher. When he has come to recognize her, he already has much knowledge. He should not be restrained by caps, bands, or tight clothing. Place him in a wide cradle, well cushioned, and leave his limbs quite free. As soon as he is able, let him creep about the room to get exercise. Bathe him frequently, at first in warm but gradually in cooler water until at last it may be quite cold. A thermometer should be used to get the proper temperature. Cold air and cold water tend to invigorate the child. Do not let him form invariable habits, in eating, sleeping, or physical activities. Simple wholesome food should be supplied. Vegetarian diet is to be preferred. The taste for meat is unnatural; and French cookery simply proves that the taste of the people is perverted. The natural man requires no such elaborate foods.

The hardening system of Locke is to be continued through childhood and youth. *Emile* is to live an active, vigorous, outdoor life both to develop his body and to train his senses while he also acquires a knowledge of natural objects and forces. In the physics class, boys of eighteen are taught the use of the lever; but every village lad knows that already. *Emile* must be as much at home on the water as on land. Carefully educated young men do not learn to swim because it is so inexpensive but instead

they are taught to ride. *Emile* shall learn both and without attending a school for either.

Gradually accustom the young child to strange sights and noises so that he may learn by easy stages not to be frightened by masks, firearms, ugly animals, and other unexpected experiences. And do not give in to his whims. The tears of children must not be allowed to become commands. Never give way to obstinacy. If he cries because of discomfort or pain, he should be relieved, but without being caressed or rocked to sleep. Servants must not be allowed to tease or to irritate him. His playthings should be very simple, such as little branches with fruits and flowers, a poppy-head with seeds that rattle, but no gorgeous trinkets, no elaborate toys.

He should hear only simple, well-articulated words, and cheerful songs. It is a great abuse to be overhasty in teaching children to speak. Have you ever heard of a child who does not learn to walk and talk in the course of nature? A child needs words only for his own ideas. Teaching him to use words without clear ideas will establish a habit from which he will suffer all his life. He will not need to learn to read before the age of ten or twelve. Provide a proper motive and he will learn to read almost without help. In the *New Héloïse*, he found such a motive by reading to the child half of a very interesting story which he will then wish to finish. In the *Emile*, he supposes the boy to receive invitations to children's parties which he will miss unless he learns to read. In both cases, Rousseau supposes reading to develop almost as naturally as walking and talking. This is an error into which no experienced teacher would fall unless, like Rousseau, he had a phobia against all persistent and systematic teaching and learning.

The danger to intellectual growth, which comes from the promiscuous use of words and symbols that are not understood, led Rousseau to develop some of his basic principles. It led him to distinguish between "the reason of sense experience" and "the reason of intelligence." Since everything that comes into the human mind, he says, enters through the gates of sense, man's first reason is a reason of sense experience. This serves as a foundation for the reason of intelligence, which is another name for Locke's "reflection." This "first reason" develops early and enables the child to deal with concrete topics; the second reason, which deals with abstract ideas and especially with moral and social concepts, does not develop until the adolescent period. It matures late and to appeal to it by attempting to teach a child rational conduct and social studies is not only futile but it builds up in the child the false notion that merely knowing words is real knowledge. Verbal "knowledge comes but wisdom lingers." Such teaching will tend to preclude the child's ever acquiring clear

ideas about the most important subjects in the world, namely, human relations and morality.

Right and wrong are words which the child simply cannot understand. To do wrong means for him merely to do what is forbidden without understanding why. The true course is to give no commands, to prohibit nothing. Necessity must be his teacher. We merely set him free in situations in which he will not hurt himself and let him learn by experience and the results of his own conduct. If he falls, he will be bruised. He will be more careful the next time. Punishment must never be inflicted on children but should always come to them as the natural consequence of their own imprudence. This is the famous doctrine of natural punishment which was to be exploited by Herbert Spencer. If Emile breaks a window pane, let him suffer the resulting inconvenience, for it is better for him to have a cold than to be a fool. When he becomes an adolescent, his ability to reason will develop. Then we shall teach him the need for moral and social conduct and then he will obey willingly, not the tutor but society itself. Meanwhile we shall treat him according to his age. Childhood has its own way of seeing, thinking, and feeling. Nature would have the young be children before they become men.

From this flows a second more general principle which Rousseau calls the most important, the most useful rule of all education. It is that we should not try to gain time but to lose it. Early education should be chiefly negative. It should consist, not in teaching virtue and truth, but in shielding the heart from vice, the mind from error. This is why Emile is brought up in the country away from the evils and vices of the city and the bad manners of flunkeys. This is in harmony with Rousseau's basic principle that "Everything is good as it comes from the hand of the Author of Nature." A very useful outcome of this principle is that in practice it gives the tutor time to study the nature of his pupil. Each mind has a form of its own; but the traits of the child mind can be learned only by observation as they develop. A wise education proceeds by observing the child and adapting its measures to the individual capacities and needs.

A principle of curriculum making also follows from the law that the child is to be taught by experience and not by verbal lessons, by his own reason when it develops and not by the reasoning of adults. Memory and reason do not develop independently of each other. The former depends upon the latter. The child may indeed remember words mechanically but it is only through judgment that he will understand ideas and relations. I say then, declared Rousseau, that children, not being capable of judgment, have no real memory. They retain sounds, forms, sensations, but rarely ideas and still more rarely their combinations. Pedants think dif-

ferently, for they teach nothing but words without the experience which would give them meaning. The study of languages is the rubbish of education.

In connection with this attack on the study of languages, we should notice that Rousseau assumes, contrary to fact, that Emile at twenty will be able to read Latin and Greek without having systematically studied them; and should compare his scornful attitude toward foreign languages with his inadequate treatment of the problem of learning to read the native language.

Not only languages but also history, fables, literature, and geography as usually taught are among the "inutilities" of early education. All studies learned from books and by means of language, signs, and symbols of every kind except the mother tongue, and drawings made by Emile himself, are to be postponed until adolescence or later. He must never learn anything by heart. Even the fables of La Fontaine, artless and charming as they are, must be omitted from this "natural" education. History should be taught only to older children. It is easy to put the words king, empire, revolution, or law into the vocabulary of children, but they will have no true ideas of the things intended.

There are, however, some general ideas which may be taught to the young child. One of these is the idea of property. This may be best done in a garden. Emile will see growing plants and this will interest him and he will wish to plant things for himself. The tutor now contrives to have the boy plant some beans on the spot where the gardener has recently planted some rare melon seeds. Naturally, the gardener is angry and reads the boy a lesson on disturbing valuable seeds with his miserable beans; and he ends by offering Emile a small plot where he may raise things which shall be his own. From the experience, the boy learns the meaning of mine and thine; but the reader should notice what Rousseau does not mention, namely, that there is also a good deal of language in this lesson, and that Emile will need to have more experiences and will have to assimilate more language before he can have a complete idea of property.

Geometry, drawing, and music should also be taught to the young child through experience, projects, and active doing. Geometry should be taught, not by demonstration, but inductively by drawing figures and by comparing and measuring them. "Draw accurate figures, combine them together, put them one upon the other, examine their relations, and you will discover the whole of elementary geometry in passing from one observation to another, without a word of definitions, problems, or any other form of demonstration but superposition. I do not profess to teach Emile geometry; he will teach me. Geometry means to my pupil the successful use of rule and compass."

Drawing, like geometry, is not to be taught but rather invented. Emile will never copy drawings but will learn to draw from natural objects. To give him an incentive, his drawings will be framed and hung on the wall so that he will have a record of his progress. Both geometry and drawing will teach him the art of seeing. His games and sports also will not only invigorate his body but will teach him to estimate, compare, measure, and to use his senses in becoming acquainted both with the world around him and with his own growing abilities. When a small child plays at shuttlecock or an older boy at ball games, his eye and arm are trained in accuracy. To spring from one end of the hall to the other, to estimate the bound of a ball still in the air and to send it back with a strong and steady hand, trains both the limbs and the senses. This is the necessary preparation for work in the natural sciences, and all that scientific instruments do is to sharpen our sense-observation. A large portion of book two is devoted to this subject, to which Rousseau's particular attention was probably directed by Pcreira, the skillful and philosophical teacher of the deaf, who lived near Rousseau in Paris.

Music is a suitable subject for the young child. It is to be learned at first by hearing and by rote singing. The boy will easily catch simple melodies, and harmony may be gradually introduced into these exercises, the tutor taking the bass. Teaching him to read the notes may be postponed. "Moreover to learn music thoroughly we must make songs as well as sing them and the two processes must be studied together. First give your young musician practice in regular well-cadenced phrases; then let him connect these phrases with the very simplest modulations; then show him their relations to each other by a fit choice of cadences and rests. Use a simple tuneful air, with its bass so clearly indicated that it is easily felt and accompanied, for to train his voice and ear he should always sing with the harpsichord."

The third period of the boy's life, which extends from the age of twelve to the age of fifteen, is the period of intellectual education and is treated in book three. Because of the boy's mental immaturity up to this time, necessity has been our guide but now utility is to determine our course. The understanding of the physical environment and an introduction to social problems are to be our aims. In the next period, after the age of fifteen, we shall be concerned with moral and social conduct and with religion; and the studies of the third period will prepare the way for those interests. Necessity, utility, and morality form the three successive spirals of human development; and curiosity is the constant motive force in all of them. Emile's progress in geometry will serve as a ready test of his intelligence; but in any case human intelligence is limited and the years of man's life are few and those which may be wholly devoted to study are far

fewer. Not only is man unable to know everything but he cannot even learn all that is known. Our first task, therefore, is to eliminate from our course those studies for which there is not time or need. We shall omit all that is false, all that is useless, all that is merely showy, all that requires a full-grown mind for its comprehension, and all that which, though true, might mislead the young. We are thus reduced to a circle much smaller than the whole of knowledge but one that is still immense with respect to the powers of a youth.

The most important part of what remains is geography and science, the knowledge of our physical environment. All these sciences are really one and should be taught in the same way, the senses being our guide. Let there be no book but the world. If your pupil is made attentive to natural phenomena he will soon be curious; but to nourish this curiosity never be in haste to satisfy it. Ask questions but let him solve them. He is to discover science, not to learn it. In science there is no room for authority. In teaching him geography, show him not globes and maps but the earth, the sky, the setting sun, and on the morrow the rising sun. We saw the sun set over there, you will say to him, now it rises here; how does that happen? We shall not be in any hurry for the answers. Before we have answered the question about the rising sun, we shall make another beginning. We shall choose the city where Emile's father lives and his country house and we shall trace the road connecting them. Let him make a simple map of all this, gradually filling in streams, villages, and roads, and enlarging the boundaries of our sketch as we explore the surrounding country. There is no need for carrying maps in the head provided he understands the art of making them and has a clear idea of what they mean. For our experiments in magnetism and other topics in physics and chemistry, we shall make all our apparatus. This should all be invented according to need and not prepared beforehand. Complicated apparatus from a shop might be neater and give more accurate results, but neither the operation nor the results will be so well understood. Besides, the construction of such equipment provides excellent training in manual skills. If the boy develops skill and scientific talent, he might learn to make mathematical instruments, telescopes, and other precision equipment. But we do not so much aim to teach him the sciences as to give him scientific tastes and an understanding of scientific methods. And yet the questions upon which Emile is employed should have coherence and follow a sequence, and the resulting knowledge, though elementary, should be systematic as far as it goes.

Before the age of fifteen, the time will arrive when Emile may begin the study of society; the industrial arts are the best introduction to such questions. The second half of book three is devoted to this topic, and we have suggested, in the preceding paragraph how the transition is to be

made by means of manual skills. Rousseau also provides a more explicit introduction to social problems in a colorful passage on the story of Robinson Crusoe who, by his situation, was driven to practice "the natural arts" of self-preservation, which also provide the basis for social participation. Robinson Crusoe is "the happiest treatise on natural education" and indicates the best standards by which to judge the social education which is to follow. To show the boy how men depend upon each other, we shall not use moral problems but the industrial and mechanic arts. We shall go from shop to shop and, not content with seeing how the work is done, we shall take part in it. We shall prefer the basic industries, such as work in wood, iron, or agriculture, to engraving, gilding, or diamond cutting, which are merely decorative and superfluous arts. Of all the occupations which furnish subsistence to man, that which approaches nearest to the state of nature is manual labor.

Emile must have a trade which would be of use to Robinson on his island. He and his tutor will learn the trade together in an actual apprenticeship. Cabinetmaking or carpentry and not farming was the trade selected because it leaves the workman free to pick up his tools and leave if conditions become unsatisfactory. We must reflect that society is subject to revolutions. France is standing on the edge of a social cataclysm and, when the threatened revolution breaks out, Emile must be free. His trade will teach him how and why men work for each other. He will learn the need for specialized labor and the exchange of the fruits of labor and that money is simply a conventional standard of value and means of exchange. This whole passage in the *Émile* was doubtless inspired by a similar exposition of the bases of society in Plato's *Republic*.

Adolescence is treated in book four. Rousseau describes it as a period of storm and stress, when the passions rise in tumultuous power and put in jeopardy the whole fabric of education which has been built up. We are twice born, once as a child and now into manhood. Our basic passions are love of self, or the desire of self-preservation, and egoism, or the desire to dominate others. From the former, with wise guidance, love of others and all kindly feelings may grow. True love, whether of others or of the one preferred from the opposite sex, will always be held in honor by mankind. To be loved we must be worthy of love and this provides an excellent basis for moral education; but it may also lead to egoism and so to rivalry, jealousy, and hatred. The true method of moral education is to delay the growth of the passions until judgment and self-control have had time to develop. There are dangers in books, in low companions, and in obsequious servants who flatter the young at the expense of their morals. Rousseau, perhaps because of faults in his own character, does not seem to know how to develop self-control, and the education of nature does not

provide an adequate basis for such education. On sex education, he has some good advice. When sex questions arise we must meet them frankly and honestly, and our replies should not raise more questions than they answer.

This is the time to study mankind, and we must do this before the young man is exposed to the pomp of courts and the evils of society. To show him the world before he knows men is to corrupt him. He must be able to estimate society at its true worth before you expose him to it. This may be done in part through history. The chief value of that study is that it teaches morality, and the best part of history for this purpose is biography. If, as John Morley says, Rousseau knew very little history, he nevertheless outlined some good criticism of history as it was written in his day. But few historians would agree that it is their function as historians to teach morals, although many would admit that history furnishes valuable materials to the moralist, the political scientist, and the educator. This is also the time to teach religion, and Rousseau shows, in his eloquent "Confession of the Vicar of Savoy," how he believed religion should be taught. He believed that the intelligence of a well-educated young man will find, in his own heart and in the world, convincing evidence of God, human freedom, and immortality, without making any appeal to revelation.

In the last book of the *Émile*, he shows how Sophy is to be educated, or rather trained, to charm and serve her Emile. In the education of women, Rousseau does not rise above the conventional ideas of the eighteenth century and he repeats the sentiments which he had already employed in the *New Héloïse*.

7. LA CHALOTAIS ON NATIONAL EDUCATION

In France, where the Jesuits were in control of education, the idea of national education received little support until the latter part of the eighteenth century, when La Chalotais, Condorcet, and many others began to promulgate it. The *Essay on National Education* was written by La Chalotais in 1763. It was an attack rather than a program. It was directed against political and religious privilege and especially against the Jesuits and their schools rather than toward national education; but yet it contained an argument for a secular system of public schools and it offered a regular plan of studies. There was the usual attack upon the decadent humanism of that period and the charge that the Jesuits taught little but Latin and that ineffectively. Their pupils, he declared, cannot tell a bad argument from a good one, set forth the principles of their religion, or even write a letter. But more important still, the Jesuits, who are presuming to prepare citizens of France, give their allegiance to a foreign power, the pope in

Romc. He demanded, instead, a national system of education, because every state, he claimed, has the right and duty to educate its own citizens. Yet he was an educational reactionary, for he restricted schooling to the upper classes. As a mercantilist, he wanted to limit the number of the clergy and lawyers, whom he regarded as economically unproductive. Considering the opposite end of the social scale, he condemned any extended education of the working classes because it would make them discontented with their lot as laborers.

8. THE PLAN OF CONDORCET

In the generation following La Chalotais, interest in national education increased rapidly in France. Turgot, who was for a short time the capable finance minister of Louis XVI, proposed in 1775 the creation of a Council of National Education which should control all schools, including those of the primary grades. In the primary school, he proposed to have instruction given in manners and customs and the social duties of citizens, with a schoolmaster in every parish to teach the usual elements and also elementary geometry and the principles of mechanics. Diderot, in his plan of a university, proposed schools which should be open without distinction to all the children of the nation where publicly paid teachers should instruct them in an elementary knowledge of all the sciences. But it was Condorcet (1743-1794) who prepared the most careful plan for the education of the French people along modern lines in his *Report on Public Instruction*.

The Marquis de Condorcet was an original mathematician, a philosopher, and one of the leaders of the Revolution, an aristocrat by birth but a democrat by conviction. He was also one of the great exponents of the theory of historical progress. One of his finest achievements was a life of Turgot, whose plan for the financial rehabilitation of France he had ardently supported. Living in times of social upheaval, he was a friendly spectator of the drama of the American but a tragic actor in the French Revolution. He was chosen a member of successive national legislatures and was commissioned by one of them, the National Assembly, to prepare a report on education. This he presented in the spring of 1792. It was a document of about fifty pages containing a plan for a complete system of national education; but it was meant to be more than that, namely, a charter of freedom, self-realization, and happiness. Condorcet was possessed by two ideas: the idea of liberty and the idea of human perfectibility.

The aim of national education is a part of the larger aim of every social institution, namely, the general and gradual improvement of the human race. This desired improvement of all would be attained, he continued, by

offering to all individuals the means of securing their welfare and their rights, of satisfying their needs and fulfilling their obligations; by giving to each the opportunity of perfecting to the fullest extent all those talents with which Nature has endowed him. Then each will be able to perform his political duties; and only then will the political equality of the citizens guaranteed by the law become a fact. The individualistic spirit and the optimistic tone of this statement are apparent. The counterpart of this interest in the individual was his cosmopolitanism and interest in the welfare of all mankind. The needs of mankind impose upon governments the obligation to establish schools in which every individual may develop fully all his natural talents; and this, given the opportunity, everyone will do. The direction of such a view diverges at an angle of practically one hundred eighty degrees from the usual nationalist position that governments should support education for the sake of national unity, and economic and military power. Condorcet would have the government serve the people; and the people were to him, not a mass, but a group of individuals.

The outlines of his plan are clear and logical, as one would expect from a mind like Condorcet's. His basic principles demand universal education with equal opportunities for everyone and with curricula and facilities as complete as money and time will allow; as much freedom as possible from political control, from political propaganda, and from the political suppression of truth; and continued opportunity for adult education throughout life. He proposed four grades of schools: the primary schools, one in every village to teach the elements including measurements, morals, and some agricultural and industrial instruction; the secondary schools, one in each town of four thousand inhabitants, in which the sciences and social studies were to be taught; the institutes, one or more in each of the ninety departments of France, in which the applied sciences such as agriculture and the mechanical arts were to be taught; and the lyceums, corresponding to the university in grade, of which there were to be nine in the whole country. Education was to be free in the primary and secondary schools; scientific, social, and civic studies were to be emphasized at the expense of the languages and the fine arts; the courses in the institutes and lyceums were to be elective; special attention was to be given by the teachers to methods of teaching, the use of demonstrations and other illustrative materials, the preparation of good textbooks, all for the purpose of making the student as soon as possible independent of the teacher and school. In his faith in the common man's desire for knowledge and enlightenment, Condorcet was one of the most optimistic of all educational writers. Comenius believed that the average man had great, practically unlimited capacity to retain what he had been taught; but Condorcet believed that the average man would ardently and persistently pursue knowledge, if

only the means were made available. Not only in the lower schools but even in the institutes, a certain number of chairs were to be reserved in each classroom for those citizens who had not been able to receive a complete education but who, while not being regular students, might yet wish to follow a course of instruction or even merely to be present at a few lessons.

To make it possible for poor but talented children to continue their education above the primary schools, Condorcet proposed to have about four thousand national scholarships created. Each of these was to maintain a national scholar for a year. The plan was to open to the poorer classes an "abundant source of prosperity and learning" and to society a "powerful means to maintain the natural equality of man." The plan has no provision for normal schools or teacher training.

The final proposition of Condorcet's plan was quite unrealistic. To protect the schools against political interference, he proposed to place the system under the control of a self-perpetuating board of scholars which he called the National Society of Sciences and Arts. It was to be their duty to supervise the schools, to perfect the sciences and arts, and to disseminate useful discoveries. We may applaud his purpose but surely no government would continue to support a full complement of national schools over which it was not allowed any sort of control. A nonpartisan board, either elected or appointed, would have been a more reasonable suggestion.

The actual French school system will be separately considered. The hopes of the Revolution were long deferred, but during that period there were drafted many, a score or more, plans for a system of schools for the French nation. For the most part they asked for publicly supported and controlled secular schools with a practical, civic, and largely scientific curriculum. Education was to be free and universal in the lower grades at least. In general they proposed a centralized system of state administration and some scheme of normal schools for the preparation of teachers.

The rationalism which the eighteenth century inherited from Descartes and Locke was followed by romanticism, in education as well as in literature. Both the evangelism of Wesley and the doctrine of fraternity, although differing in other respects, supported the growing humanitarianism which reformed prisons and asylums, created schools for the deaf and the blind, and improved the care of children. The natural right of the individual to liberty and equality was considered to justify the democratic revolutions against kings who claimed to rule by divine right.

The eighteenth century was a period of diverse trends in education. Humanism, although it had become traditional, was still dominant, but a young and vigorous realism was opposing it. The church schools for the common people were beginning to feel the hostility of democrats and nationalists demanding

universal education for citizenship. Political and scientific advances led from the uncritical optimism of the writers of utopias to a definite but still uncritical theory of progress. Although the philosophers favored education, they did not fully realize the central place which the school should have occupied in this program. Civilization was expected to produce a perfected society easily and quickly.

Rousseau thought otherwise. He believed that man had been perverted and enslaved by a civilization which had fostered oppression, corruption, injustice, an artificial and extravagant urbanism, and "those ridiculous institutions called colleges." Men had been happier in simpler conditions. He also disagreed with his contemporaries on the nature of the world and man. Nature gave sufficient grounds for belief in God, freedom, and immortality. Man should guide his life not only by reason but also by feeling and conscience.

According to Rousseau, the first task of the teacher is to study the child. True education is self-education which is a dual process of growth in native capacity and the discovery of truth. It will be the teacher's function to provide the environment that will be best for the growth of the child's body and mind and that will stimulate in him the spirit of investigation. Growth and discovery can take place only where there is no constraint. The child's freedom must not be circumscribed and he must be placed in a rich and stimulating environment. Rousseau's key idea that it is the environment which provides the conditions for education is important and was influential. Through Pestalozzi and Froebel it influenced the schools which the Western nation-states were beginning to establish.

QUESTIONS

1. Who were the leaders of thought and action in France in the eighteenth century? How well did they agree?
2. Do Sulzer's ideas reveal any of the contemporary conflicts of opinion?
3. What is a deterministic view of man? Compare the views of Condillac and Helvetius with "behaviorism."
4. Consider the probable effect of Rousseau's errors, follies, and misfortunes upon his doctrines.
5. Would Rousseau's scheme of state education allow any freedom or develop free men?
6. How do we learn the full meaning of words such, for example, as war or golf? Gradually, or all at once? Do we ever learn the full meaning? How do these questions bear upon Rousseau's theory that teachers should not use words that children do not understand?
7. Discuss, pro and con, the doctrine of natural punishment. See Herbert Spencer's *Education, Intellectual, Moral, and Physical*.
8. Consider the values and limitations of teaching by the method of discovery by the child.
9. What are the most serious defects of the educative environment proposed for Emile? Why did Rousseau leave out the additions which you are suggesting? Would you include other children, and family life? Why or why not?
10. Compare the main elements of Condorcet's plan with the basic ideas of public school systems today.

FOR FURTHER READING AND STUDY

Few writers have evoked as much discussion as Rousseau. All over the civilized world his ideas are still "living thoughts" which call out either the acclaim or the criticism of partisans. Among the following books, those of Babbitt, Davidson, and Maritain are critical if not hostile and in the same vein is Paul Elmer More's "Shelburne Essay" on Rousseau, which is not listed below. Rousseau is also considered in most of the collections of essays on "educational reformers" by Frank P. Graves, R. H. Quick, and others. These have been mentioned in the reading lists in previous chapters. The paper on Rousseau by Quick is especially illuminating. We do not list Rousseau's *Confessions*, but there are many editions in French, English, and other languages.

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Archer, R. L., *Rousseau on Education*, New York, Longmans, Green and Company, 1912, 278 pp.

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Ballantyne, Archibald, *Voltaire's Visit to England, 1726-1729*, London, Smith, Elder & Company, 1893, 338 pp.

Boyd, William, *The Minor Educational Writing of Jean Jacques Rousseau*, Glasgow, Blackie & Son, Ltd., 1910, 159 pp; *The Educational Theory of Jean Jacques Rousseau*, New York, Longmans, Green and Company, 1911, 368 pp.; *From Locke to Montessori*, London, George G. Harrap & Co., Ltd., 1914, 271 pp. The collection of Rousseau's "minor educational writings" by Boyd should not be neglected. From Locke to Montessori has short passages on Pereira and on Condillac.

Davidson, Thomas, *Rousseau and Education according to Nature*, New York, Charles Scribner's Sons, 1898, 253 pp.

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- Rolland, Romain, *The Living Thoughts of Rousseau*, New York, Longmans, Green and Company, 1939, 185 pp.
- Schaupp, Zora, *The Naturalism of Condillac*, Lincoln, Neb., University of Nebraska Studies in Language, etc., No. 7, 1926, 123 pp.
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10 NEW SCHOOLS FOR OLD

THE NEW VIEWS OF NATURE AND MAN WHICH AROSE IN THE eighteenth century led to the creation of radically different schools: the Philanthropinum for the upper classes by Bascdow and his disciples and the new elementary school by Pestalozzi and a long line of followers. Education became a more active process: observational methods and new studies were introduced, and old subjects were taught in new ways and for new purposes. The new purposes were central in the whole movement for it was intended that education should change the individual lives of the people and should promote the gradual but thorough reformation of society.

Even before the revolutions of the eighteenth century, autocratic but far-sighted rulers, who are sometimes called benevolent despots, had begun to foster national education for patriotic service to the state. They meant to use the schools to make the nation strong in peace and dangerous to its enemies in war but without developing liberal ideas among the people. Instead, feelings of loyalty to state, king, and church were instilled and care was taken that the lower classes should not be educated beyond the needs of their condition. The peasants were to be satisfied to remain peasants, hardworking, God-fearing, proud of king and country, and with no desire to move to the city. Such benevolent despots were the Hohenzollerns of Prussia, Maria Theresa and Joseph II of Austria, and Catherine II of Russia. Eventually, the democratic and revolutionary changes which created the new United States, overturned the government of France, and liberalized those of England and Switzerland, affected Prussia also but not until the nineteenth century. Meanwhile, in the more democratic countries with a free press, religious toleration, and civil liberty, the schools could develop along new lines. And even in autocratic countries private schools, which did not come under the inspection of the church or the civil authorities, were often allowed to experiment with new studies and methods. Three of the reformers whom we consider in this chapter,

Planta, Basedow, and Salzmann, developed private schools for future leaders, while Pestalozzi became the apostle of universal education for rich and poor.

1. A GREAT SWISS SCHOOLMASTER

An early pioneer in the development of new schools was the Swiss pastor and schoolmaster Martin Planta (1727-1772). The history of Switzerland in the eighteenth century sparkles with great names. The Bernoullis and Euler were mathematical geniuses; Albrecht von Haller was a poet and naturalist; and Bodmer and Breitinger, who were professors in Zürich, were critical scholars. Of the great Swiss educators of that time, we have already named J. G. Sulzer and Rousseau, and they were followed by Pestalozzi, Fellenberg, Wehrli, and Gregoire Girard. The economic life of the country was reviving and new industries were developing. Agriculture was in a depressed state but the agricultural societies which were established show the interest that was taken in its improvement. One of the new industries to which we have referred is sufficiently indicated by two facts: that the first Swiss guidebook was issued at this time and that Swiss engineers began to build the excellent roads which now connect the different parts of the country.

Martin Planta came from a peasant family in the Grisons. His older brother, who was a pastor, supervised his early studies and then sent him to Zürich where he learned mathematics, the sciences, languages, and divinity. He was ordained at an early age and was for a short time the pastor of a church in London. Before he was twenty, he began to plan a new kind of school which received government approval in 1760 and was established in the following year at Haldenstein. Pupils came even from foreign countries, and a number of prominent men received their early education there. One of these was Frederic C. La Harpe, statesman and tutor of Czar Alexander I. The aims of the school were to develop Christian and patriotic men of affairs thoroughly imbued with the need and desire for Swiss unity. The curriculum included three modern languages and Latin, arithmetic and advanced mathematics, physics, history, geography, drawing, dramatics, bookkeeping, music, and dancing. Observation and independent thought were encouraged and the curriculum and methods were adapted to individual capacity and need. Gymnastic exercises and mountain climbing in the Alps were features of the school. Excursions were taken to collect minerals and plants, and these collections were used in the school. There was a shop for work in glass, wood turning, and cabinetmaking. A system of student government was used to prepare the pupils for participation in democratic political life. Thus it is seen that

Planta developed a Philanthropinum more than a decade before Basedow. After the founder's untimely demise, no one could be found who was able to carry it on successfully and in 1777 it was closed.

2. BASEDOW AND THE PHILANTHROPINUM MOVEMENT

In a moderate and tentative fashion, Johann Bernhard Basedow (1724-1790) favored state control of education; but he took this position not so much to develop patriotism and a strong state as because he opposed the church and favored deism and secularism. The experimental school which he founded and named Philanthropinum cultivated international rather than national feeling and the love of mankind, as the name suggests. In this respect, Planta's school was not typical for it was both national and religious in spirit.

Basedow was a German and was born in Hamburg. In his time the idea of state education was no longer a novelty in Germany, but it was the idea rather than the fact that was common, although in the sixteenth century several German states, including Württemberg in 1559, established state systems, in the seventeenth Weimar and Saxe-Gotha did likewise, and in the eighteenth the large state of Prussia attempted to develop state education. Compulsory attendance was decreed in several countries. Basedow favored this trend and proposed to place education under the control of a Council of Public Instruction. And such a body was constituted, although not especially through his influence, in Prussia in 1787, but it continued to delegate the local management of schools to the clergy. Conditions, therefore, remained about as they had been. Basedow's work was necessarily done in a private school; and his own and later Philanthropinums had little direct influence upon the common schools.

No friendly star shone upon Basedow at home or at school. To escape harsh treatment in each of these he ran away and shipped for the East Indies, but the vessel went aground at Copenhagen and he was persuaded to return home. He became a tutor in a nobleman's family and a governess taught him French by conversational methods. He attended the Universities of Leipzig and Kiel and in 1752 received the doctor's degree from the latter. His dissertation dealt with language instruction and embodied several of the ideas which he later applied in schools. This was ten years before the *Emile* appeared and proves his partial independence of Rousseau who, however, also seems to have influenced him decidedly. He began to teach but his deism and his boastful and bombastic speech aroused the opposition of his colleagues and the public.

In 1768, Basedow issued an educational manifesto which in his inflated manner he called a *Memorial to the Friends of Mankind and Men of*

Means on Schools and Studies and Their Influence upon the Public Welfare, with an A. B. C. Book of Human Knowledge. The latter part of this title shows that the *Memorial* was to be the first volume of a series. The second in the series was his *Elementarwerk*, or elementary "Book of Knowledge." With a good book, said Basedow, anybody can be a good teacher, which is a piece of educational heresy not yet wholly extinct. The *Elementarwerk* was to be such a book. When completed, it comprised four volumes. The first volume was a *Book of Method for Fathers and Mothers* (1770). It deals with the education of the nobility "since reform must begin at the top." The whole work was finished in 1774, and included an atlas and many copperplate engravings by a famous Polish artist, Chodowiecki. This new *Orbis Pictus* of the Age of Reason, he claimed, had "a sufficient stock of all necessary knowledge for the instruction of youth, their elders, teachers, and tutors, and to make complete the information of every reader." Goethe said he liked the original *Orbis Pictus* of Comenius better.

The *Memorial* was also intended as a prospectus and brought its author the aid of Prince Leopold of Dessau. The school, which was founded with his help, was called a *Philanthropinum*, a name that was widely copied by similar institutions. From its location, Basedow's school was also known as the Dessau Institute. The teaching in the Dessau Institute did not follow the bookish line suggested in the *Elementarwerk*. Studies were selected for their utility or supposed utility. Languages were taught through conversational methods. There were regular and carefully graded physical exercises and games under a special teacher; drawing, handwork and training in skills and crafts, field excursions, and nature study were included; and the whole scheme was to be characterized by activity, observation, and thoughtfulness. Friendly relations between teachers and pupils were cultivated and the use of force was to be avoided. Pupils were to participate in the school government and group activities were emphasized. The school was to become a center for the preparation of teachers who were to spread the *Philanthropinum* ideas. Even in the Kiel dissertation of 1752, Basedow had proposed a normal school, facilities for practice teaching, and a school library. As we shall show, these ideas were given partial application at the University of Halle by one of his assistants.

The founder and friends of the school were disappointed that only fifteen pupils attended when the Dessau Institute opened in 1774. The number grew slowly, but it was never large, although pupils occasionally came from distant places. Great men praised the plan. Kant declared that only in *Philanthropinums* were teachers free to experiment. But the fault lay not so much in the plan as in its execution. Basedow's character was not admirable and, in a teacher, not tolerable. He was not himself a good

teacher and his immoderate claims left a bad impression. To the author and philosopher J. G. Herder, the work of Dessau seemed superficial. Basedow died in 1790, and a few years later the Institute was closed.

Such success as the school had was due in part to Basedow's assistants. The one indispensable teacher was C. H. Wolke (1741-1825). Kant, who was greatly interested in this school, said of Wolke that he was unassuming, indescribably industrious, and not to be deterred by difficulties. He was in fact a gifted man, skilled in drawing, painting, and etching, and an independent thinker. J. H. Campe (1746-1818) was on the staff for a short time. In earlier years he had been the tutor of two boys who became famous, the scientist and diplomat Alexander Von Humboldt and his brother William Von Humboldt, a scholar who became Minister of Public Instruction of Prussia and played a leading part in organizing the University of Berlin. Campe was a voluminous writer. One of his books was his *Robinson the Younger*, an imitation of DeFoe's classic. *Robinson the Younger* outlived its hundredth edition and was read by children in all languages from Gibraltar to Moscow. The development of a literature for children was promoted by the Philanthropinum movement. Another Dessau teacher was E. C. Trapp (1745-1818) who worked with Wolke to develop a more systematic plan of lessons for the Dessau Institute. Afterward he became professor of pedagogy at the University of Halle and director of the practice school (1779). This seems to have been the first example of a university practice school for the training of teachers. He published a *System of Education* in which, like Sulzer, he took psychology to be the essential foundation for a science of education. The hostility of the rest of the faculty at Halle made his university career unhappy and after four years he resigned.

3. SALZMANN'S PHILANTHROPINUM

Although several attempted it, Christian G. Salzmann (1744-1811) was the only one of Basedow's staff who succeeded in establishing a permanent Philanthropinum. Like Pestalozzi, he was moved by ideals of social reform. He was for three years the chaplain and teacher of religion and other subjects at Dessau and always acknowledged his indebtedness to that experience. The school which he opened in the duchy of Saxe-Gotha with the help of its ruler, Duke Ernest II, celebrated its centennial in 1884.

Salzmann's first criticism of the Dessau Institute was directed against the teaching of physical education. He thought more attention should be given not to teaching about health but to the formation of health habits and cleanliness. The dancing, riding, running, jumping, and swimming which the school carried on were good, he admitted, but all this seemed

to him to be mere play. Physical education should include work, hard and useful labor. Perhaps it would not be unfair to say that Salzmann wished to interchange the roles given to work and play in the old schools: the classroom lessons were to be taught through play; but in the physical education, work and the acquirement of manual skills were to be included. Shops with tools and materials were an essential part of the scheme. Every teacher was to have a skilled trade.

Every child, Salzmann said, is a born naturalist, and the streams and fields of the beautiful Thuringian land "offer us so many interesting things that we shall not have time to examine them all." Nature itself, he said, is my science cabinet. The school should have fields and gardens to satisfy the children's passion for activity. It must be located in the country for reasons of health, morals, and intellectual education. The pure air and the vigorous outdoor occupations of the country make for health. Life in the country avoids the temptations which the city spreads before youth. Only in the country are geographical and botanical excursions and the study of nature at first hand possible. Like all the philanthropists, Salzmann was opposed to the rising "new humanism" with its emphasis upon Latin and Greek and its preoccupation with distant lands and ancient peoples. The immediate surroundings and the life of the present should engage the children's attention.

Salzmann gave advice to teachers as follows: Be healthy; always be cheerful; play and work with the children; strive to form clear ideas and to make them clear to the children; learn to use your hands skillfully; become well educated yourself and keep on learning; and, in all you teach, be an example. In the conduct of his school, he was aided by able assistants, among whom was C. F. Guts Muths, the organizer of school games and founder of systematic school gymnastics. The first pupil to be admitted to the school was Karl Ritter who became the founder of the "natural method" in geography and a famous professor of that subject at the University of Berlin. Salzmann was an important contributor to the children's literature which the Philanthropinum movement developed. In his *Carl of Carlsberg*, which appeared about the same time as Pestalozzi's *Leonard and Gertrude*, he painted a picture of the school evils of the time. He proposed to collect into a pile, which would reach the clouds, all catechisms and spelling books and into another, equally high, all rods and canes and to set fire to both at once. His once popular *Stories for Children and Their Friends* was begun in 1778 and was continued until the collection filled seven volumes.

It will now be clear that Pestalozzi, who was to carry out many of the preceding ideas, was born into an experimental age. The study of nature,

the care of the body, the training of the hand, self-activity and pupil self-government, the appeal to thought and intelligence, naturalism and rationalism in morals and religion, were leading ideas of the reformers. In the new schools of that time, these ideas were put to work. Pestalozzi accepted these ideas and this experimental spirit, but he added to them love. His great heart went out to all mankind but especially to the poor and the oppressed. He was the true philanthropist. He began, not at the top in the hope that some of the good things of the new schools would seep down, but at the bottom, among the common people. He turned his attention toward the reform of the schools for the children who lived in narrow homes among the mountains and even to the waifs who had no homes at all. He became the apostle of a new common school.

4. PESTALOZZI, REFORMER OF ELEMENTARY EDUCATION

Human nature is put together in a thousand ways and Pestalozzi, who received the *Émile* so enthusiastically and read it in his eighteenth year, was a very different person from the author of "that dream book." He had a warm and sympathetic heart and a calm and well-unified personality free from the inner conflicts that racked and shattered the soul of Rousseau. But they had one weakness in common; they were equally impractical. Rousseau retreated to the world of ideas; but Pestalozzi, during his whole life, attempted to make ideas work and with but indifferent success. A large school such as he developed at Yverdon requires money and financial management; it demands system and organization; and it calls for a personality which can bring into harmony and cooperative endeavor the divergent personalities of the staff. In the face of such problems, Pestalozzi was helpless; but in spite of that, he was a very great man whose influence reached far and whose fame will last.

It is one sign of his greatness that Pestalozzi understood himself as few understand their own nature, and another that he can use the first person singular, which he does constantly, with hardly a trace of egotism. We shall let him introduce himself by means of some selected and rearranged sentences from his book, *Views and Experiences*. "From childhood," he wrote, "it lay in the peculiarity of my character and of my home training to be benevolent and kindly and to have unlimited confidence in those about me. I came early into association with the suffering and the poor and, in a thousand experiences with them, came to feel the deepest sympathy with them and their many sorrows; and I likewise came to feel the urgent call to attempt to remove the multifarious causes of the evils which they endured. Nor was I alone in this for, in my time and in my Swiss fatherland,

many of the pupils and the contemporaries of my teachers, Bodmer and Breitinger, were also trying to seek out the sources of the evil which kept the people of our fatherland from happiness and blessedness."

Johann Heinrich Pestalozzi (1746-1827) was born in Zürich, a city which was at that time, as it is today, famous for wealth, culture, and excellent schools. It is located on the shores of a beautiful lake in the German portion of Switzerland and the German language was his mother tongue; but his name is evidence that there was Italian blood in his veins. This was inherited from John Anton Pestalozzi who came from the southern slope of the Alps to Zürich where he prospered and became an adopted citizen. In Zürich, the Pestalozzis were business and professional people connected with some of the most eminent Zürich families. Henry's father was a physician. He died when the future educator was six years old, and thereafter the mother with her faithful servant, Barbara, devoted herself entirely to the care and education of her three children. It is often said that feminine influences were too strong in Henry's early life; and his natural tendency to self-sacrifice, generosity, and excessive trust in others were certainly not counteracted by his very kind mother and her gentle servant. This genial family circle was the basis of the vision which filled his mind and led him to consider a good home as the greatest of all means of education.

When we find Pestalozzi eulogizing the virtues of domestic education, we should recall that in his own case he recognized the deficiencies of such training. He admitted that the best of mothers brought him up as a spoilt darling, who never left the domestic hearth. In childhood he was allowed to see the world only from the sheltered confines of his mother's living-room and the equally narrow limits of the schoolroom. Experiences which would have developed manly vigor, sports, and work were largely excluded from his life. One window into the sorrows and sufferings of the real world was, however, provided by long residences with his grandfather, who was the minister and conscientious shepherd of souls in a village outside of Zürich. There, and in the poorer parts of the city, Pestalozzi saw enough of the poverty and oppression to lead him to become a social reformer. And it is as a social reformer that we must consider him. He saw that pity and charity were mere palliatives and that they indeed nourished the disease they were meant to cure. Education became for him the means by which society was to become first enlightened and then purified and elevated.

From his schooling under excellent teachers, Pestalozzi derived great inspiration and a varied if not very accurate knowledge. This does not apply to the elementary school which he attended, for that was poor and he learned little. But in the University, the Carolinum, he came under the stimulating instruction of men who were to influence him strongly. Bodmer was a professor of history, a literary critic who debated with Lessing, and

the founder of the Helvetic Society for the spread of liberal political ideas. Pestalozzi's membership in this society had embarrassing consequences, as we shall see. Brettinger taught the ancient languages and edited an edition of the Septuagint. Both men leaned toward naturalism and romanticism and helped to restore the rights of the fancy and the imagination in German literature, and the rights of the people in Swiss political life.

The inspiration which Pestalozzi received from his education is well indicated in his own account of the results. He said that he seized quickly and avidly upon general ideas but failed in everything that demanded precise knowledge, trained skill, or practical competence. Realizing that this is a fair statement of the case, one is surprised to learn that he had acquired some facility in the Greek language. When one of his teachers published a correct but uninspired translation of some orations of Demosthenes, Pestalozzi handed in a more vigorous rendering of one of the eloquent and patriotic passages. Part of this school exercise was published and was the first item from his pen to see the light. Freedom, benevolence, and patriotism were the watchwords of the education which he received, but he was not taught how to achieve these ends practically in the Swiss cantons. His school education, in his opinion, was not more realistic than his home education had been; and from this conviction came his attack upon an education of words without experience and of ideals without deeds.

When he tried to realize his ideals for the fatherland, he promptly found himself in difficulties. The young men of Switzerland and Zürich, his contemporaries, were deeply affected by the revolutionary ideas of the eighteenth century, especially by the writings of Rousseau. Pestalozzi joined a small circle of "patriots" and when the Helvetic Society published a propaganda weekly, *The Reminder*, he contributed to its columns. About this time a friend, who was supposed to have taken part in some underground, possibly treasonable, activities, fled the country and Pestalozzi was arrested on the suspicion that he had helped in the escape. Although he was soon released, the experience probably led him to give up a contemplated career in the law and public affairs. Another plan to study theology and to follow in the footsteps of his grandfather was also given up.

The objective which he had in mind in considering those two professions was social, that is, moral, political, and economic reform, and especially the improvement of the condition of the destitute peasantry. The city of Zürich and especially certain patrician families had a practically feudal control over the lower classes and the country people of the canton. It would be a mistake to suppose that Pestalozzi changed his main purpose; in that, he was singularly consistent throughout life.

Agriculture was making rapid advances in various countries, and the first schools of agriculture had recently been established. The advances in

the natural sciences, and the ideas of the physiocrats, also, led many to regard a perfected agriculture as the panacea for social ill-health. And some examples of the "new agriculture" were close at hand. Hans Hirzel, the city physician of Zurich and a zealous promoter of agriculture, had just written a popular book, *The Economics of a Scientific Farmer*, which was based upon an actual case, and this work may have been the deciding factor in leading Pestalozzi to undertake an agricultural experiment. Hirzel's opinion was that "the science of agriculture is worthy the attention of the wisest and best men for upon a well-ordered economy the happiness of the whole state depends." A short apprenticeship was arranged with the proprietor of a model farm and Pestalozzi spent the winter and spring of 1768 in attempting to learn the details of farm management by actual participation. Meanwhile he had become engaged to a young woman with excellent family connections, Anna Schulthess. And now this young man, bred in a large city, educated in a classical school with one winter's experience on a farm, purchased a hundred acres of stony land and erected thereon a beautiful but too-elaborate set of buildings. In September 1769, Pestalozzi and Anna Schulthess were married and took up their residence at Neuhof, as the estate was called. The marriage was a lifelong success but not so the farming. The venture failed; and the failure was very positive and came in an incredibly short time. Only the generous financial help of his mother and of his wife's relatives was able to stave off bankruptcy.

Neuhof was to become known, not for the plan to redeem agriculture, but for a partially successful effort to redeem waifs and outcast children by instruction coupled with industrial occupations. The custom of the time was to bind out orphans and poor children to farmers, who sometimes mistreated them and frequently exploited them. Pestalozzi's new institution was not conceived as a form of poor-relief but as an example of a new kind of education in which domestic and farm occupational training were joined with moral training and instruction. With help from friends, Pestalozzi was able (1774) to receive about fifty abandoned children, some of whom he had himself picked up in the streets. He neglected nothing that could give these children occupational, intellectual, moral, and religious education. They were taught the usual school arts, and also spinning, weaving, and farm work, and he especially tried to influence them along moral and religious lines. So large an establishment required a considerable staff which, in the spring of 1778, numbered about a dozen persons. From time to time, he made reports of progress in the newspapers and asked for further support.

The condition of many of the children was greatly improved, but some of them were already so tainted with vice or inured to begging that little could be done for them. Some of the parents also failed to cooperate and

the institution developed increasing deficits. In 1780, after six years of successes and failures, it had to be closed. He was compelled to sell most of his land, retaining only his home and buildings and a garden. "For years," he wrote later, "I lived in the midst of fifty little beggars, sharing my bread with them, living like a beggar myself in order to teach beggars to live like men." The worst effect of the failure upon his own fortunes was that he was now discredited in Zürich where he had come to be considered a bankrupt and a hopelessly impractical idealist. But most of those who scoffed at his failure had done nothing and would do nothing to relieve the distress of their fellow men.

With the closing of the Neu Hof Institute a new period opened in Pestalozzi's life. Outside his own family, almost the only supporter who remained was Isaac Iselin of Bein, municipal secretary and publisher. Iselin thought he saw a successful popular writer in Pestalozzi and he opened to him the columns of his paper, the *Ephemerides*, and thus introduced him to the literary world. Yet these were difficult years for Pestalozzi. He had begun to doubt, even more radically than before, his own powers but never his purposes. Practically, he had failed; the world of ideas was still beckoning to him. Much of what he then wrote, and he wrote a great deal, was not printed till long after; but what he published, in the two decades after Neu Hof was closed, gave him a European reputation. His first successful writings were the *Evening Hours of a Hermit* (1780) and his educational romance *Leonard and Gertrude* (1781); and these were followed by *Swiss News*, *People's Weekly Review*, *Christopher and Elizabeth*, and the continuations of *Leonard and Gertrude*. Literary success brought him many correspondents, some from the highest social circles, and contact with the Illuminati, a secret society which played with reform ideas but never did anything more. He came to discover that nothing was to be expected from the dilettante reformers who applauded his ideas from a distance; and yet he continued to hope and work.

The story of *Leonard and Gertrude* was about the Swiss village life, which Pestalozzi knew inside and out from living with his pastor-grandfather. The heroine of the tale is a calm and loving mother who kept her children busy spinning while she taught them Bible verses and moral sayings and discussed with them the common questions of conduct as they arose. Her teaching of arithmetic likewise exemplified the plan of dealing with concrete experiences. They counted the threads in weaving, the steps across the room, the number of panes of glass in the windows, and they learned the meanings of common terms of quantity and form, such as "long," "narrow," "round." She taught them to observe carefully everything about them and to use their observations in practical work. Love led the way. And when the school in the village was established the same spirit

and methods were employed. Gertrude taught that the school must be like a home but with wider interests. Through Leonard and Gertrude, Pestalozzi reached an audience that extended far beyond the borders of his own country.

He was a writer, but to what purpose? While the people everywhere were suffering and were sinking to ever lower depths of despair and dependence, he was spending his time in making books. What triviality! So he thought. To write merely for fame or money would have seemed to him a sin. To act, to do, to work positively, actively for the freedom, economic independence, and moral improvement of the people, that was life, a life which he was not permitted to share from 1780 to 1798. That was why these were difficult years for Pestalozzi.

The French Revolution, more than anything else, cleared the air for him. He took part in the pamphlet war of the time but, unlike the young Schiller, he saw clearly the evils along with the good of the revolutionary movement. Even so he again burned his fingers. With Schiller, Washington, and others he was named a "Citizen of the French Republic." This close approach to the Revolution caused him to be still more suspected in Zürich and raised up enemies who never forgave him his liberal tendencies, especially his support of the peasant demands for political power and economic justice. His most philosophical book and one of the important works of the period appeared in 1797: *My Investigations into the Course of Nature in the Development of the Human Race*.

The Revolution gave him another opportunity to engage in teaching. Except for that, he would now be forgotten; because of that, he will always be remembered. In 1798, as a result of the French Revolution, Switzerland became the Helvetic Republic; and Philipp A. Stapfer, a distinguished intellectual, was appointed minister of arts and sciences. Stapfer determined upon a reform of the elementary schools and Pestalozzi submitted to him his plan of a school for poor children similar to the one described in *Leonard and Gertrude*. The Directory approved the scheme. Meanwhile Stapfer appointed Pestalozzi editor of the *People's News*, a government paper; but events spoke louder than his words and with more convincing arguments. In putting down an insurrection in the Forest Cantons, where the population was largely Catholic, the little town of Stanz was burned down and most of its able-bodied men were killed. As a result, the government had to undertake the care of about five hundred orphaned and needy children. Stapfer had previously offered Pestalozzi a political appointment which he declined with the declaration: "I want to be a schoolmaster." In the end, Pestalozzi had his wish when he was put in charge of about eighty orphans of Stanz and vicinity. A convent was made available and he became a schoolmaster in 1799 when he was already fifty-three years old. With the

help of a single servant, he undertook to care for the physical, mental, and moral needs of his flock. The work was made more difficult because of the open hostility of the people, who regarded him as a heretic, and the almost complete lack of the usual instructional materials. It was at Stanz that he began to emphasize sense perception and to develop a psychological basis for teaching. There he developed his doctrine that there should be no impression without expression. He could employ manual work only slightly, but he came to see that the chief value of such work was educational, not economic. When he had succeeded in establishing paternal relations with them, he was able to do even more for the moral growth of the children than for their mental culture. For his own further development, it was important that at Stanz he came to see that children could be taught effectively in groups of considerable size. Great as was the success of this half-year it was fortunate for him that the progress of the war put an end to a task that was beyond any man's endurance. Stanz was again occupied by the troops and he went to Gurnigel for needed rest. Confessional differences and political complications prevented his return to Stanz; and instead Stapfer sent him to Burgdorf.

Pestalozzi's most important period as a teacher and school reformer began at Burgdorf in July 1799, and came to a close in 1804. At first, he taught in a school for the youngest children of the poor but later he was permitted to open his own school in the castle. There he developed his "new method" and secured his first collaborators, Krüsi, Tobler, and the drawing master, Buss. There he wrote his fundamental exposition of the new method, *How Gertrude Teaches Her Children*, "an experiment in teaching mothers how to bring up their little ones." With Krüsi, he prepared his *Book for Mothers*. His work was interrupted by a short trip to Paris where he was sent as a member of an official Swiss delegation. There is no evidence for the story about a meeting with Napoleon. In 1803, he secured a new disciple, Niederer, a gifted young man with whom he came to be very closely associated although afterwards violent opposition developed on both sides. At Burgdorf, the stream of famous visitors began, and there were always several foreigners who had come to study the school. Herbart, who had just completed two years as a tutor, praised the careful grading of the lessons and the thorough mastery of the elements which the pupils achieved. He also raised some questions. Gruner of Frankfort, who later established a Pestalozzian school in which Froebel found his life-work, gave an enthusiastic report of a moral lesson which he heard Pestalozzi give. Stapfer organized a Society of Friends of Education to solicit funds and to spread the fame of the school.

Emanuel Fellenberg (1771-1844), with whom Pestalozzi formed a brief alliance when he had to leave Burgdorf in 1804, had a plan for a system of

agricultural schools for Switzerland. This plan, which he carried out on a large estate near Berne, included a school for the upper classes and a separate school for the poor. Industrial and agricultural, as well as literary, instruction was provided; and the students were organized into a school republic. Since Fellenberg was an able administrator, it might have been thought that the two men would admirably supplement each other. But it turned out that they were unable to cooperate. By August of the same year Pestalozzi had settled in Yverdon where he was given a lifetime lease of a castle as the home of his school.

The new institution in Yverdon increased in numbers and in reputation and became a Mecca for educators from Europe and America. Prussia annually sent groups of young teachers that they might "warm themselves at the fire of Pestalozzi's genius" and learn the details of his system. Nicolovius of the Prussian state department of education became an ardent admirer. Fichte called the attention of the whole world to Yverdon in his *Addresses to the German Nation*.

While his work was praised and imitated in foreign lands, a strong opposing party in Switzerland launched violent attacks against the school. Pestalozzi demanded an official investigation. The resulting report was not exactly hostile but it was cool and partly ironical in temper. They damned the school with faint praise; and no one read Niederer's long and heavy arguments in reply. These attacks from the outside were not fatal, but dissension developed within the staff especially between Niederer and Schmid. The harmony of the early, struggling days was destroyed beyond recovery. Schmid left in 1810 but had to be recalled because his administrative ability was essential. By vigorous measures, he rescued the Institute from imminent bankruptcy but he could not establish peace. Pestalozzi's wife died in 1815. Within two months, sixteen of the teachers sent Pestalozzi an ultimatum: "Dismiss Schmid or we will leave in a body." They left. Niederer, Krüsi, and Ramsauer remained for a time but finally they also resigned. An unedifying war of pamphlets and legal process followed. An effort was made to establish a new school for poor children at Clindy near Yverdon. There a young Englishman taught; and to him Pestalozzi addressed the thirty-four *Letters to J. P. Greaves* which were also published in German with the title *Mother and Child*. Finally, in 1825, Yverdon and Clindy, which had been combined with it, were closed and Pestalozzi returned to Neuhof.

The world had changed since the fall of Napoleon. Although he had suffered immeasurably from the conflicts of the last fifteen years, Pestalozzi continued to work to the end. In his last sad efforts, *Swan's Song* and *Life's Experiences*, in which he judged himself impartially and fairly, the faith in mankind of his early years still shone bright. The questions with

which he had dealt were now more urgent than ever. How to educate the common people had become an exigent political question. Democracy was becoming an international movement. The greatness of the master's reputation in his last days is shown by the fact that Schmid was able to get a contract from a large publishing house and the promise of fifty thousand francs for a general edition of Pestalozzi's collected writings. Pestalozzi dedicated his share of the sum, one-half of the expected proceeds, to the furtherance of education. "Everything for others, nothing for himself," as his epitaph has it. In November 1826 he made his last public appearance to give an address on the education of small children. He died on February 17, 1827, and was buried in the churchyard beside the schoolhouse at Birr. In 1927, hundreds of addresses, papers, books, and memorial exercises attempted to do honor to his memory and to set the seal of world-wide approval upon his efforts.

5. PESTALOZZI'S METHODS

Pestalozzi's life was his work; but yet a systematic account of the "new method" is necessary. Beyond all theory, Pestalozzi meant to be a practical educator. Education was to be based upon experience and since the child did not already have it, the experience had to be provided in the home and school. This was to be done mainly through *Anschauung*, an untranslatable word for which we shall use Observation with a capital letter. The process of Observation begins with confused sense impressions. The world is for the child, as William James was to say, "a blooming, buzzing confusion"; or as Pestalozzi said: "The world lies before our eyes like a sea of confused sense impressions, flowing into one another." Through attention, the sense impressions grow definite and distinct. Objects, with their qualities, separate themselves out so that they become units and can be recognized, described, and finally named and classified. With naming and classification we reach a third and final stage of observation, the stage when objects, not merely sense impressions but objects, are seen in relation to other objects and finally to all objects. The idea of all objects, of a whole or universe, is an example of an intuition. The universe is something which we have never seen and cannot see except in a few of its parts but which we must assume intuitively. This, then, is the course of Observation: confused sensations, clearness and description, definition, and classification.

Several remarks on this bit of Pestalozzian psychology are necessary. Pestalozzi is here influenced, probably unconsciously, by the doctrine of Kant that in knowledge the mind supplies the "form" and the world the "matter" or content of knowledge. "Matter without form is blind; form

without matter is empty." Completed observation is due not only to sense impressions but to the mind which by intuition contributes quite as much as the outside world to the total result. And the contribution is twofold. Attention selects what is seen; the mind is not a white sheet of paper or a photographic film which merely registers whatever appears. The mind selects and also contributes the final stage of Observation, the categories by which objects are defined and classified. Pestalozzi took the basic categories to be number, form, and language. The course of Observation is followed not only by the child but also by the adult. We all make our ideas clear by the same general process. The teacher has the responsibility of guiding observation. Pestalozzi did not merely turn the children loose to find their own way among phenomena; but he, more than Rousseau, emphasized the value of guided individual and social experience in directing the process of learning.

The project is one form of a complete Observation lesson. While it would be hazardous to attempt to name the inventor of the educational project and to decide whether he was Rousseau or Basedow or even Plato, it is clear that Pestalozzi used it. A good example of its use comes from a pupil at Yverdon in the following description. "The first elements of geography were taught us from the land itself. We were first taken to a narrow valley not far from Yverdon, where the river Buron runs. After taking a general view of the valley, we were made to examine the details, until we had obtained an exact and complete idea of it. We were then told to take some of the clay which lay in beds on one side of the valley, and to fill the baskets which we had brought for the purpose. On our return to the Castle, we took our places at the long tables, and reproduced the valley we had just studied, each one doing the part which had been allotted to him. In the course of the next few days more walks and more explorations, each day on higher ground, and each time with a further extension of our work. Only when our relief was finished were we shown the map, which by this means we did not see until we were in a position to understand it."

This example illustrates the large part which the teacher played in Pestalozzi's "new method," or Art of Education as he also called it. Some might doubt whether the exercise should be called a project because of the absence of student planning. This is a question of definition. On the larger question of the teacher's function in Pestalozzi's method one may further quote in modified form from *How Gertrude Teaches*, as follows: "If our development through nature alone is not sufficiently rapid and unhindered, the business of the teacher is to remove the confusion of first sense impressions, to separate the objects to make them distinct, to place those together which are related to each other or similar, making

them clear in this way and thereby evolving definite ideas. Instruction accomplishes this when it presents confused sense impressions in units so that they can be counted; when it then places them in different positions so that we may perceive their forms; and when it brings them into the cycle of our previous knowledge and names them." Here Pestalozzi nearly or quite anticipates Herbart's famous doctrine of apperception but he does not develop it. The passage is quoted because it is a general description of *Auschaunug* or Observation.

Using the method of Observation, Pestalozzi sought to expand the school curriculum, particularly along scientific and naturalistic lines. The spread of his doctrines and of the whole Pestalozzian effort was furthered both by the scientific movement and by the humanitarian movement of the nineteenth century. Nature study, physiology and hygiene, geography and the sciences were knocking at the school doors seeking admittance; and Pestalozzianism was both cause and effect of this condition. Science had heretofore been the concern of scientists; but it was now to be simplified and its elementary and practical phases were to be taken up in general education. We may show how this could be done in a single case.

Geography had already attained some standing as a school subject, but the older methods and content were generally unsuitable for small children. Locke had regarded it as a branch of mathematics and had based his method upon the globe and its circles. Another type of geography, almost the opposite of this, was purely informational, beginning with map study and lists of names, boundaries, and products. Basedow and Rousseau had proposed to teach the geography of the locality in which the pupils lived. But Pestalozzi actually did this in elementary education. It was Pestalozzi who introduced local geography, or home geography, studied by project methods; and who said that this subject should deal with the lives of the people, with the country in which they live and the resources from which they make their living. This was actually a new study and came to be called human geography. Its origin is traced to Pestalozzi and Karl Ritter (1779-1859) and their interpreters. Ritter, the founder of the modern study of geography, after a visit to Pestalozzi at Yverdon wrote: "I have seen more than the Paradise of Switzerland for I have seen Pestalozzi. Never have I been so filled with the sense of the sacredness of my calling and the dignity of human nature as in the days I spent with this noble man. Pestalozzi knew little geography but he taught me all that I know. In listening to him I first conceived the idea of the natural method. It was he who opened the way to me." Ritter began to publish his great work on human geography in 1817 and appropriately called it the *Science of the Earth in Relation to the Nature and History of Man*.

In his application of Observation to geography, Pestalozzi was guided

by intuition, pupil interest, and purpose. But it seemed that in some subjects such as reading or arithmetic a different method should be used, and in these fields he turned for help to analysis and scientific technique. In all fields, however, the new method developed the use of oral teaching and the subordination of books to direct experience.

Direct experience in the school skills seemed to require that the pupil should build up each skill from its elements, as written language is constructed from the alphabet. Pestalozzi therefore went out in search of teaching alphabets. Each subject was to be reduced to its simplest elements, its ABC. Unfortunately, he went wrong at the outset, mistaking mechanical parts for psychological units.

We may illustrate his idea from the teaching of language. He correctly pointed out that speech comes before reading and writing and is psychologically fundamental to these; but he went astray when he analyzed language into syllables as the natural units of speech. Only an infant who cannot yet speak attempts to speak in syllables. When significant speech begins, a higher synthesis occurs and the idea, and later the sentence, becomes the psychological element. Perhaps he was misled by the age-old use of lists of syllables in schools, some of which lists have come down to us in the school exercises of the ancient Greeks and Babylonians. At all events the school child is far past the syllable stage of utterance, and Pestalozzi was mistakenly attempting to take the pupil back not forward. In connection with the syllables and the early language lessons, Pestalozzi also developed a form of concert recitation in which the children repeated his statements after him. This is in general the poorest of all forms of oral instruction and belongs to the list of errors of Pestalozzian practice. But his emphasis upon oral teaching, oral expression by the children, and the use of conversational methods was an advance. The teacher had to be better prepared, more skillful, and freer in the use of ideas than in the older book recitations. The children likewise had to depend upon their own eyes, minds, and speech faculties. Oral teaching called for activity and resourcefulness.

Oral and object teaching revolutionized the teaching of arithmetic, and Pestalozzi became the founder of what is essentially a new subject, primary arithmetic. Arithmetic had been mainly a commercial subject and was taught by formal rules and examples. Pestalozzi based primary arithmetic upon the process of counting. Here, for once, he was fortunate in his idea of the elementary units, the ABC of the subject. He began by having children count small objects like pebbles or sticks, arranging them in groups of two, five, and ten and in that way inductively building up the notion of number. Much of the work was oral, and this led to the development of primary arithmetic teaching without the use of pencil and paper, whence it was called "mental arithmetic." Books featuring "thought prob-

lems" with small numbers under the title *Mental Arithmetic* were issued by enterprising authors and publishers; and for a hundred years mental arithmetic and written arithmetic went their separate ways as independent subjects in schools. This was an educational exerescence for which Pestalozzi is not to be blamed, but he is to be honored as the founder of the elementary arithmetic of everyday life and of the arithmetic methods which have had an extensive development in our own day.

Speaking develops before reading, counting before calculation, and before children write they draw, according to Pestalozzi. He made the ABC of drawing consist of straight and curved lines in all possible positions, horizontal, oblique, vertical. Practice on these was to prepare for penmanship. The written letters were then analyzed into the various "strokes" and to each of these appropriate practice was assigned. Drawing was emphasized for its own sake also and not merely as a preparation for handwriting. Number, form, and language formed the categories of teaching, as we have seen, and drawing was one means of cultivating the sense of form. Geometry was another and this also Pestalozzi taught inductively in the manner of Rousseau. Even physical education was supposed to have its ABC. The elements were simple motions, which after being practiced separately were to be combined into the complex activities involved in games. All this will sufficiently illustrate what Pestalozzi meant by psychologizing education. He meant that the teacher should start with the elements of every subject and should follow the natural order of child growth and development.

In addition to the subjects mentioned, Pestalozzi included in his school manual and agricultural experiences, physical training and military drill, nature study, music, and moral and religious education. Literature, history, and the aesthetic side of life hardly received their due in his curriculum. He himself taught morals and religion although Niederer, who was a theologian, also gave religious instruction. Few if any teachers ever have so loved not only children but each individual child, or have been able to gain their confidence so completely as Pestalozzi. Love wins reciprocal love, he said. Pestalozzi, like Lincoln with whom he has some traits in common including the love of a good story, was an intensely religious man although it is not quite clear what his exact beliefs were. Much was made of the great holidays. At Christmas, the usual tree with apples and candles was set up in the middle of the chapel. New Year's Day was celebrated with a speech from Pestalozzi, a religious ceremony, and in the evening a grand dinner. But the great celebration of the year was January 12, Pestalozzi's birthday, for which preparation began immediately after New Year's Day. Often the pupils gave a play based upon the heroic history of Switzerland for which they made the costumes themselves.

For most subjects, special teachers were available. For music, these

were Pfeiffer and Nageli, both Swiss, who prepared popular collections of songs for the young. Music was taught by the natural method, beginning with rote-singing. Singing had a large place in the life of the Institute. Physical education was at one time taught by Joseph Neef, an ex-soldier from Napoleon's army who later attempted to establish Pestalozzian schools in the United States. At Burgdorf and Yverdon, carefully graded gymnastics were regularly taught and games were played. Target shooting was one of these games, and the older boys had military drill. Skating in winter, swimming in summer, and long mountain tramps at all seasons gave vigorous exercise. Pestalozzian physical education had wide influence in Spain and France and other countries, while Spiess carried it into Germany. After the industrial and farm school at Neuhof, it is surprising that not more was done on these lines at Yverdon. Manual work was on the program. It was not always systematically carried on, but some crafts like bookbinding and making geometrical models together with gardening were practiced.

Long hours were the rule in the Institute. Pestalozzi rose early and began to dictate to Ramsauer, one of the teachers who acted as his secretary. At the beginning and the end of the day, he held personal conferences with the pupils. There were ten lesson periods, each an hour long, with short intervals between, taking up the whole day from six to eight. But some of the lessons consisted of practice and work demanding little preparation such as drawing, gymnastics, and music. The last hour, from seven to eight in the evening, was free time when pupils were allowed "to work for themselves," in writing letters, drawing or modeling, or doing whatever they pleased in the room. Three times a week the masters handed in reports on the work and conduct of each boy to Pestalozzi. The younger teachers, many of them teachers-in-training, had the supervision of the pupils out of the classroom, played games with them, and slept with them in the dormitories. But the pupils always enjoyed great freedom. The two gates of the castle stood open all day and pupils could come and go as in a family.

We shall summarize the main features of the Pestalozzian system before we take up its spread and influence:

1. A good home is the ideal educational institution for it is a center of love and active cooperation for the common welfare.
2. Since the larger society requires a range of education which the homes cannot give, schools are necessary. In spirit and discipline, these should be modeled upon the good home. Personal love for the child must guide the teacher who stands in the parents' place. The discipline, though kind, must yet be strict and firm.

3. The harmonious development of all man's powers is the aim of education. We aim to produce men educated for manhood first of all and only secondly to train citizens and workers.
4. Because they have been most neglected and are in such desperate circumstances, the regeneration of the lower classes must receive first attention. This calls for an education which rouses the will and vitalizes their powers, for charity only makes bad conditions worse.
5. Education is to be social and universal.
6. Instruction is to be "psychologized," that is, it is to be based upon the psychological development of the individual and the race. This involves the grading of pupils, the presentation of subject matter in harmony with the stage of growth, and the enlistment of the child's purposes and self-activity.
7. Instruction is to be carried on by Observation and by graduated activities, beginning with the simplest elements of each area or skill.
8. The curriculum must be expanded along practical and scientific lines. Although he did not use these words his concept was that of an "activity and experience curriculum."
9. Teaching is a skilled occupation and a moral vocation. Teachers can best learn their occupation and vocation in experimental schools which are themselves seeking means of improvement.

6. THE INFLUENCE OF PESTALOZZI

The actual influence upon the schools was greatest in Germany. In his homeland, many citizens, the local authorities of Yverdon, and even the Swiss government rendered him aid and contributed to the support of his schools. Many of the teachers who were prepared in his schools taught in Switzerland and Hermann Krüsi, one of the most important members of Pestalozzi's staff, became principal of the normal school at Gais. But many Swiss leaders were suspicious of his aims and critical of his methods and his French sympathies. In Germany, his system was rapidly introduced after the defeat of Napoleon and became the basis of the new educational reforms. In the largest German state, the resulting organization was appropriately named the Prussian-Pestalozzian system. Many Prussian teachers and heads of teachers' seminaries were trained by Pestalozzi. One important philosopher, Fichte, and two great German educational theorists, Herbart and Froebel, were directly influenced by Pestalozzi. In the chapter on education in Germany, the Pestalozzian influence upon that country will be more fully treated.

Great Britain was moved through Pestalozzi to adopt object teaching and to develop her infant schools, but the Pestalozzian influence upon the

training of teachers was most important in Great Britain. The Home and Colonial School Society established a model infant school which applied Pestalozzian methods and educated several thousand teachers in the new way. The English did not become fully aware of Pestalozzi's work until late. The famous writer Maria Edgeworth visited him early and again in 1820. Writing home on the latter occasion she said: "He recognized me and I him; he is, tell my mother, the same wild-looking man he was, with the addition of seventeen years. The whole superintendence of the school is now in the hands of his masters; he just shows the visitor into the room, and reappears as you are going away with a look that pleads irresistibly for an obol of praise." J. P. Greaves was an assistant in the latter years. And Charles Mayo, one of the founders of the Home and Colonial School Society, was at Yverdon from 1819 to 1822. It was partly due to this late acquaintance with Yverdon in its decline that English Pestalozzianism became formalized from the beginning. By this is meant that the forms of the method were followed without the spirit, without experiment, or taking advantage of new opportunities, or making special adaptations to particular needs. But after all, except for the monitorial schools, British teacher education owed its beginnings and some of its good features to Pestalozzi. Battersea Training College definitely followed Swiss ideas. It had a model school for experiment, demonstration, and practice; and Battersea introduced Pestalozzi's reforms in the teaching of arithmetic.

The movement reached the United States through several different channels and it is more fully considered in the chapters on American education. Joseph Neef, mentioned above, came in 1806. The early teachers' journals, Albert Picket's *Academician*, 1818-1820, William Russell's *American Journal of Education*, beginning 1826, Barnard's *Journal* of the same name, the *American Annals of Education*, and many others introduced Pestalozzian ideas. Official reports such as Cousin's, Stowe's, Bache's, and the Seventh Report of Horace Mann went into the matter systematically. Visitors to Europe wrote travel books such as John Griscom's *A Year in Europe*. There were really three periods of Pestalozzian influence upon American education. Neef came in 1806, established a school, and published his *Sketch of a Plan and Method of Education* but exerted little influence. The Fellenberg manual labor system was introduced as early as 1816 but went into a decline by 1840. Meanwhile, about 1830, the second Pestalozzian period helped to develop the idea of the universal elementary school, teacher training, a broader curriculum, and milder discipline. The American normal schools, and similar schools in all countries, were generally influenced by Pestalozzi. The third period showed English influence and introduced object teaching. Because of the leadership of the Oswego Normal School this is usually called the Oswego Sys-

tem. Although the contributions of the new education of the eighteenth and early nineteenth centuries to teaching practice were great, there were also great defects and these were due in part to a faulty psychology. We next turn to the efforts which were made to develop a more adequate view of human and child nature and of the process of learning.

Not all of the eighteenth-century trends of thought and feeling affected education immediately. Rationalism, which gave the period its name, the "Age of Reason," influenced the schools less than the romantic views and humanitarian ideals of the time. Nationalism, also, although it was growing stronger with every decade, did not gain control of the schools until the following century was far advanced. Only then did the governments establish the ministries of education which had been demanded by Basedow, Condorcet, and others; and only gradually did the schools become secular. Except in German countries, compulsory attendance was long deferred.

The schools of this chapter may be regarded as different varieties of one species whose characteristics were realism and democracy. The experimental spirit which also characterized them was connected with their realism and democratic liberalism.

Their debt to realism is clear from the broad, naturalistic curricula and the activity methods. Among the methods used were observation, excursions and the collecting of natural objects, handwork and construction projects, and simple demonstrations and experiments. There was a decided renaissance of physical education and a vigorous creative movement in this field.

The democratic liberalism of the time led educators to organize pupils into school legislatures, courts, and administrative bodies. The new schools attempted to develop not only knowledge and language, but also skills, moral character, and social conduct. To develop pupils along these lines, most of the new schools employed some form, and several of them an elaborate form, of pupil self-government. The purpose was not mere school discipline but political and moral education. They were to learn how laws are made and executed by making and executing laws and by governing themselves. Cecil Reddie, an English educator of a later day, expressed the idea by declaring that the school must be a smaller state and a larger home. Pestalozzi especially stressed the latter attitude. His school was to be a family, and was to aid in transforming society into a fraternal social order.

Pestalozzi's greatest idea was the conception that the common school should provide a liberal education for the common people. Through education the masses were to become true men and women, wise, free, and noble. Schools with such a task would require teachers who had the qualities that they were to instill. Pestalozzi's international influence upon teacher education and his promotion of educational experimentation were of lasting value to the cause to which he gave his life.

QUESTIONS

1. What do you consider to be the meaning of the phrase "benevolent despot"? Examples? Are the ideas included in it self-contradictory?
2. How fully does the school of Martin Planta answer the description of the new schools which concludes the present chapter?
3. Criticize Basedow's principle, that with a good book anybody can be a good teacher. What truth, if any, does it express?
4. Were there any entirely new ideas in Basedow's *Philanthropinum*?
5. What were the values and what the shortcomings of the books for children which were written by the Philanthropinists?
6. In what respects were Salzmann's school and doctrine an improvement over Basedow's?
7. Arrange in the order of their importance the qualities that made Pestalozzi a great educator; and in the same manner his greatest defects.
8. Why was the story of Leonard and Gertrude applauded not only by the poor but also by the rich and powerful?
9. Trace the evolution of Pestalozzi's methods.
10. What are the differences between Pestalozzi's curriculum and that of a good present-day elementary school?
11. What seems to be intended by the statement that, by means of the common school, Pestalozzi meant to provide a liberal education for the common people?
12. In what ways do the new schools imply a new conception of nature and of man?

FOR FURTHER READING AND STUDY

Many of the important books on Basedow and Pestalozzi are in German and have not been translated. The literature on these men, their contemporaries, and their period is very extensive and cannot be adequately represented in a short bibliography. Books dealing with the introduction of Pestalozzian ideas into the United States will be given in a later chapter. There are other good English biographies of Pestalozzi than those named below, and Quick's *Educational Reformers* should not be overlooked.

- Anderson, Lewis F., *Pestalozzi*, New York, McGraw-Hill Book Company, Inc., 1931, 203 pp. Contains selections and an introduction.
- Andress, James M., *Johann Gottfried Herder as an Educator*, New York, G. E. Stechert & Company, 1916, 316 pp.
- Barnard, Henry, *Pestalozzi and his Educational System*, Syracuse, N. Y., C. W. Bardeen and Co., 1906, 751 pp.
- Bosse, Richard, and J. Meyer, *Christian Gotthilf Salzmann's pädagogische Schriften*, Leipzig, A. Pichler, 1886-1888, 2 vols.
- Channing, Eva, Translator, *Pestalozzi's Leonard and Gertrude*, Boston, D. C. Heath and Company, 1906, 181 pp. Much abridged.

- Cooke, E., Editor, *Pestalozzi's How Gertrude Teaches Her Children*, Syracuse, N. Y., C. W. Bardeen and Co., 1898, 391 pp.; *Letters on Early Education, Addressed to J. P. Greaves*, Syracuse, N. Y., C. W. Bardeen and Co., 1898, 180 pp.
- Dändliker, Karl, *A Short History of Switzerland*, London, S. Sonnenschein and Co., 1899, 322 pp.
- Escher, Hermann, Chairman Editorial Committee, *Pestalozzi and his Times, a Pictorial Record*, New York, G. E. Stechert & Company, 1928. About 80 pages of text and 165 plates, several in colors, illustrating scenes and persons connected with the life and work of the great educator.
- Fritzsche, Theodor, J. B. Basedow's *Elementarwerk mit den Kupfertafeln Chodowiecki*, Leipzig, Ernst Wiegandt, 1909, 3 vols.
- Goring, Hugo, J. B. Basedow's *ausgewählte Schriften*, Langensalza, H. Beycr und Söhne, 1880, 519 pp.
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- Guimps, Roger de, *Pestalozzi; his Life and Work*, New York, D. Appleton & Company, 1914, 445 pp. Translated by J. Russell.
- Hunziker, Otto, *Geschichte der schweizerischen Volksschule*, Zürich, F. Schulthess, 1881-1882, 3 vols. Contains an account of Martin Planta's school.
- Krtusi, Hermann, *Pestalozzi; his Life, Work, and Influence*, New York, American Book Company, 1875, 248 pp. With accounts of Pestalozzi's associates in his schools.
- Misawa, Tadasu, *Modern Educators and their Ideals*, New York, D. Appleton & Company, 1909, 304 pp.
- Oechsli, Wilhelm, *History of Switzerland*, Cambridge, University Press, 1922, 480 pp. Translated by Eden and Cedar Paul.
- Pinloche, Auguste, *La Reforme de l'Education en Allemagne au dix-huitième siècle. Basedow et le Philanthropinisme*, Paris, Librairie Armand Colin, 1889, 596 pp. There is also a German edition, prepared by Pinloche and J. Rauschenfelt, *Geschichte des Philanthropinismus*, Leipzig, Fr. Brandstetter, 1896, 494 pp.; and by the same author, *Pestalozzi and the Foundation of the Modern Elementary School*, New York, Charles Scribner's Sons, 1901, 306 pp.

11 NEW SYSTEM BUILDERS: HERBART

A COMPREHENSIVE SCHEME OF EDUCATION MUST TAKE PROPER account of the nature of the child and the adult as well as the nature of the social structure in which life is to be lived. The founders of educational philosophy, Plato and Aristotle, fixed their attention upon the latter question and, although they did not overlook the fact that states are composed of men, they developed social systems; and the society they had in view was the Greek city-state. They agreed that a satisfactory education must be directed to the preparation of citizens, and being chiefly concerned with social issues they, but Plato more than Aristotle, tended to magnify the duties and to neglect the interests and needs of the individual and the child. This attitude was accepted by teachers for many centuries. The writers of the Renaissance, and after them Comenius and Locke, discovered the individual. Rousseau accepted their individualism and, indeed, pushed it to a dangerous extreme; but his greater contribution was his recognition of the difference between the immature child and the adult. Pestalozzi tried to redress Rousseau's individualistic imbalance without forgetting that children must be educated as children before they can become men. At that point John Frederick Herbart (1776-1841) and Frederick A. W. Froebel (1782-1852) began to develop their new systems of educational thought. The novelty consisted in the psychological bases of their philosophies. Each founded his program upon a psychology, Herbart upon associationism and Froebel upon activism; and each, because he selected fundamental factors in learning and growth, must be counted among the founders of educational psychology. We shall deal with Herbart in this chapter, and with Froebel in the next.

1. THE LIFE OF HERBART

John Frederick Herbart was born at Oldenburg, the only child of a civil official. His mother, who was the daughter of a physician, directed his

studies at home and even accompanied him to the university. He was a precocious lad who read Kant at sixteen. From twelve to eighteen, he attended the classical school at Oldenburg and then entered the University of Jena where he came under the influence of Fichte and joined a student club called the "Free Men." For several years he served as tutor in a Swiss family at Berne, where he attempted to test Fichte's thought that the "self creates its own world." It seemed to Herbart, however, that the pupils did not make their world but instead were themselves made by the world of ideas which he presented to them. This is the key to his philosophy of education. Our minds are formed by the ideas that the world and our teachers impress upon us.

At the University of Göttingen, where he remained until 1809, he began as a lecturer and wrote his early books on education, ethics, and general philosophy. This activity led to his appointment at the University of Königsberg to the chair which Immanuel Kant had made famous. There he worked for a quarter of a century, lecturing, writing, and conducting a small practice and demonstration school for students who were preparing to teach. In 1811 he was married to Mary Drake, the daughter of an English merchant. At Königsberg he wrote his *Text-Book in Psychology* (1816), *Psychology as a Science* (1824), and several systematic philosophical works. That was the great Hegelian period in Germany and Herbart, although not without influence, failed to get the hearing for his philosophy which he thought it deserved. When Hegel died in 1831, Herbart hoped for appointment to the vacant chair in Berlin but he was disappointed; and two years later he returned to the University of Göttingen where he taught until his death in 1841 and where he wrote his most practical book, the *Outlines of Educational Doctrine*.

2. EDUCATIONAL PSYCHOLOGY BEFORE HERBART

The central topics of educational psychology are the topics of learning and growth. How we learn, how learning may be made easier and more permanent, how learning in one field may be applied to other fields, and how learning is conditioned by the age, the physical condition, the individual differences, and the motivation of the learners are its most important questions. The answers to such questions would go far to settle the question of how we should teach; and this is the question which most interested Herbart.

The answer Herbart gave was that we learn by association. This doctrine had a long history. Plato, for example, had noticed that a lyre will call to mind the one who had played upon the instrument. This is an instance of association by togetherness or contiguity. When any two ideas

have been in the mind at the same time or in close succession, either one is likely to recall the other. Plato had also noticed that any idea or experience tends to bring back a like experience. This is associated by similarity. Continuing this line of thought, Aristotle added a third principle, association by contrast. Thus night may suggest day, up may suggest down, and love may suggest hate. The dynamics of the process also interested Aristotle. He noted that recall is not always accidental and that deliberate recollection takes place through a seeking and selecting activity. Starting with any one of a series of ideas, we follow along from term to term until we find the desired one, when the process stops. This self-active selectivity of the mind was not always accepted by later students who tried to explain mental functions in mechanical terms; but the three principles of association mentioned above, contiguity, similarity, and contrast, became the common property of later psychologists.

Associationism became an important doctrine in educational psychology and especially so to those who were seeking a mechanical or a physiological explanation of learning. Among the latter was David Hartley, a physician, who attempted to reduce all ideas to sensations, and all sensations to nerve vibrations. He attempted to show that all association is based upon contiguity, that is, he held that all associations occur because the associated ideas have been in the mind together. Of course they do; but this does not take us very far. Neither similarity nor contrast nor any other relation could be noted unless the ideas were in the mind at the same time. But this is not enough. The association has still to be made; and many ideas are in the mind together without being associated. The basic "laws" of association do not explain why certain associations are made and other possible ones are not. The conditions which they state are necessary but not sufficient.

The doctrine of Hartley was extended and modified by Thomas Brown and James Mill, two pupils of the noted Scotch teacher Dugald Stewart. Stewart revived Aristotle's doctrine that the mind seeks and selects what is remembered. He taught that the self, through its self-active power of attention, directs recall and that, therefore, the mechanics of association alone do not fully explain memory. Brown accepted his teacher's view of the unified and active self but he also made an important contribution to association theory. He tried to answer the question raised in the preceding paragraph, Why does night sometimes suggest day, at another time sleep, or again the darkness of a cave? Why, when two possible associations come into competition, does one win the spotlight of attention while the other recedes into the shadow? To answer this question, Brown proposed "secondary laws" of association, such as recency, frequency, duration, and liveliness. Accordingly, night should usually suggest day, but if we have

recently visited a deep mine and especially if we lost our way and were thoroughly frightened, then the approach of night may recall the darkness of the dangerous underground.

To these secondary laws by Brown, James Mill added the law of primacy which says that the first association of a series tends to be stronger than the later ones. Concepts, said Mill, are formed through language which is itself formed by association. He held, further, that not only language but all human character is formed through the "universal Principle of Association" and that by the use of this principle the moral and intellectual condition of mankind may be improved without limit. The mind, according to Mill, is merely the sum of our sensations, feelings, and ideas, which association combines into groups and series. This was the general standpoint of Herbart also, but he did not accept the doctrine of human perfectibility which Mill had taken from Helvetius. Mill took education to include all the influences of life but even so he ascribed to it more power than it actually has. Education cannot overcome inherited differences for the good reason that men differ in the capacity to be educated. Herbart described this fact in terms of the differing plasticity of individuals. After Mill, association doctrine was transformed by the biological outlook of Darwin, Herbert Spencer, and Alexander Bain, but these writers came too late to influence Herbart.

Another persistent doctrine is that of the mental faculties. Like associationism, this also originated with Plato and Aristotle. Both held that the rational faculty is the highest and should control the lower ones, while St. Augustine made the will supreme and ascribed to it the power of choice in action. The faculty psychology became especially prominent in the work of Christian Wolff (1679-1754) who divided the mind into will, feeling, and intellect, and the intellect into sensation, perception, memory, imagination, and reason. In the eighteenth century both association psychology and faculty psychology had important exponents; and, since a thoroughgoing association can leave no place for faculties, a conflict was unavoidable. Herbart, who was a thoroughgoing associationist, taught that the mind acts, through its most powerful ideas, as a unit; and that there are no separate faculties. As a consequence of this view, he held that there is no possibility of formal discipline or transfer of training.

Other influences came to Herbart through Locke and Leibnitz. Locke made out that all ideas, by which he meant all mental contents, come from experience. There are no innate ideas. The mind of the new-born child is a blank sheet upon which experience writes whatever will be found there. But perhaps he gave away his case by recognizing two kinds of ideas, those of sensation and those of reflection. Ideas of reflection, if they are really different from ideas due to sensation, seem to indicate that the

mind has a pattern of its own and that not everything comes from the outside. Leibnitz attacked Locke at his weakest point, his failure to recognize the self-activity of the mind. The mind, he pointed out, is not so passive or so calmly logical as Locke made it; and he also declared that it is always active even in sleep. Here the unconscious mind enters psychology. Leibnitz called these unconscious activities *petites perceptions*, minute or slight perceptions. He used the word perception to indicate the more passive reception of ideas, and apperception to denote the active understanding of what is received. Herbart, in the same vein, used apperception to denote the assimilation of sense data and new ideas to those which are already in the mind. The knowledge which we have of plants enables us to understand a new specimen. Such clusters of ideas through which we interpret new ideas he called an apperception mass.

We have now reviewed some of the older psychological thought which influenced him. We shall notice that his philosophy, including his psychology, has the general character of natural science.

✓ 3. HERBART'S PSYCHOLOGY OF EDUCATION

The main difference between the educational psychology of Herbart and the older associationism is that ideas in his view are themselves dynamic. They are active forces and these form the substance of his psychology. Learning is the active assimilation of ideas; and the ideas already in the mind are not only active but selective.

Consistent ideas, said Herbart, will combine to form more inclusive ideas through fusion. The idea of a triangle is the result of the fusion of several ideas such as three, line, and plane. Ideas which have no necessary connection with each other but which do not conflict may also be combined. The ideas of color, form, texture, and taste may be combined to form the idea apple, or orange. This process he called complication. But ideas may be conflicting as in the case of round and square. Such ideas will compete and then the stronger will win and the weaker will be suppressed but not extinguished. The weaker ideas will be driven to the margin of consciousness or even over the threshold into the unconscious mind, from which, however, they may again emerge when the conditions are favorable. Among the terms Herbart introduced into psychology are fusion, complication, conflict, threshold, central and marginal consciousness, of which there was a hint in Wolff, and the unconscious mental processes, which he borrowed from Leibnitz. Most of these are still used by psychologists but sometimes in new senses.

Ideas have usually been considered as purely intellectual phenomena; but contrary to the usual practice, Herbart connected emotion and will

with the relations between ideas. Pleasure results when ideas harmonize with each other and pain is the outcome of conflict between them. Pleasant idea relations lead to desire and will. The strongest group of ideas will lead to action. There is no separate will in Herbart's psychology, nor any other independent faculties, but only ideas and their relations.

When a new idea is presented, it can be interpreted only by means of other ideas. It is by the context that we understand a new word, a new acquaintance, or a new experience. The word bay means a body of water, a color, or a sound. The word plate has forty or more meanings all of which are clear when it is used in context. A forest is one kind of thing to the hunter, another to the lumberman, a third to a party of picnickers, and so on. To understand the Constitution, we have to study it in its context, including its entire history. This understanding of the new by means of its associates Herbart called apperception. An apperception mass is the name for the whole body of related ideas which enable us to interpret new ideas and to assimilate them. When they become assimilated, they form a part of the given apperception mass which may then be used to interpret further experiences. Thus knowledge is built up in the mind in a series of steps. Through his experience and knowledge of the human body in health and disease, the physician is able to make a correct diagnosis from facts which the layman does not notice and which he would not understand if they were pointed out to him. This is a case of apperception. The doctrine has important applications in teaching and these Herbart used in his theory.

The mind originally, and in essence, was for Herbart simply the ground ✓ on which ideas carry out their activities. It had little more to do with mental functions than Locke's blank sheet of paper. But Herbart opposed the passivity introduced by Locke and the associationists; and, therefore, he made the ideas active forces and the mind became the moving system of such forces. Such a mind is entirely formed by the ideas impressed upon it from the outside, and education, which presents the ideas, becomes as powerful in making the mind as any associationist could have desired.

✓ 4. HERBART'S EDUCATIONAL PRINCIPLES

To a systematic philosopher like Herbart, it seemed self-evident that a practical science like education must begin by stating its purpose. We realize that as a matter of method this has its dangers. A more empirical attack will deal with children, materials, processes, and will hold questions of ultimate purpose in suspense, well aware that good educational practices, like scientific chemistry, may be used for all sorts of purposes. The purposes are not part of the science; and there are some thinkers who are

trying to develop education as a pure science unhampered by moral or political considerations. Herbart was, however, not only a scientist but also a practical teacher and the question of purpose was unavoidable.

To Herbart, it was clear that the aim of education is virtue. "As the highest purpose of man, and consequently of education," he wrote, "we universally recognize morality. He who should deny this could really not know what morality is; at least, he would have no right to take part in this discussion." And he also wrote: "The term virtue expresses the whole purpose of education. Virtue is the idea of inner freedom as a constant state of mind." That man has inner freedom in whom there is no longer any conflict between what he thinks he should do and what he actually does. Now what a man thinks he should do is determined by the ideas he has; and when these ideas are clear and comprehensive, or "many-sided," when full knowledge controls conduct, then a man is virtuous. "When volition has come into permanent accord with educated insight, virtue has been attained." But Herbart has defined education as the process of attaining virtue; and now we are told that virtue is education. Herbart tries to get out of this circle by redefining virtue in more empirical terms. He says, in effect, that virtue means, or points to, health of body and mind, good will (instead of malice, envy, cruelty, and such vices), active social cooperation, justice and the desire to avoid strife, and obedience to proper authority. Here he defines ethical conduct as that manner of life which society approves. He does not show how society itself could be improved.

Since Herbart is criticized because of the individualistic character of his educational doctrine, we should consider his view of the social virtues. When many conflicting wills come together the first need is that of preventing strife and maintaining peace. This demands a legal system of rewards and punishments. The welfare of each citizen demands a system of civil administration. The essence of welfare is found in the development of the capacities and the exercise of the powers of each person, which can be secured only in a cultural state, a civilization; and this in turn demands the "good community," to borrow a phrase from Josiah Royce. That is virtue, Herbart said, which by way of self-determination develops the good individual in a good society. This is not individualism.

Education, he said, has three phases, namely, government, instruction, and training. We shall consider the first two here and shall treat training later in this chapter. Education is possible because children are plastic, because they are able to receive and hold impressions; but this educability is limited by the age, the circumstances, and the individual nature of the pupil. And as the pupil's mind and character become mature, they become less open to external influences. While the child is still immature, there is need for government. The child, who has not yet developed a firm

moral character, must be guided by others until he is able to guide himself. This phase of education is named government. It controls present conduct while instruction and training prepare for future conduct.

Government should be free from pampering but also from a too vigorous control. The secret of good government is found in keeping children employed. It is better to have children choose their own occupations; but, having chosen a task, they should be required to complete it. Teachers must be vigilant, and reasonable in their requirements, especially where moral insight is not yet developed, but resolute in imposing deserved penalties. Boys and girls must meet their responsibilities and take their chances if they are ever to become men and women. In a phrase, good government requires the exercise of reasonable authority.

Psychology shows, according to Herbart, that ideas are formed first and that desire and will follow. There is no independent faculty of volition. The will is the resultant of the struggle between opposing sets of ideas; and the strongest ideas finally determine choice, decision, and action. Since the will is the outcome of the struggle between ideas, the will and disposition may be formed by instruction. It is instruction which builds up effective masses of ideas leading to ethical conduct. Instruction is, therefore, not merely the importation of information but it is the building of character. To give educative instruction is the teacher's chief function and this is the foundation of Herbart's theory. This is also the point at which criticism is directed when his doctrine is charged with being too intellectualist. Men do not always act from knowledge.

Educative instruction demands interest; or, putting it differently, knowledge and ideas are not effectively assimilated nor do they lead to original thought or to ethical conduct unless the pupil takes active hold of them. This is the meaning of interest or attention, which are practically synonymous. Herbart analyzes these concepts. Attention may be voluntary, deliberate, not spontaneous; or it may be native, involuntary, spontaneous. In the absence of spontaneous interest, it may be necessary to induce voluntary interest but it is not to be a forced and artificial interest brought about by the use of marks, prizes, or competition. The truly psychological method of inducing voluntary interest is the method of association. The child who is not interested in measurement and arithmetic will develop these interests when he sees that they are essential in science, design, building, or anything in which he is already interested. Because all knowledge is interconnected and forms a "circle of ideas," it is always possible to find a path from what is known and therefore interesting to what is not yet known. It is the teacher's task to find this path and to lead the pupil in it. "The circle of thought contains the store of that by which gradually interest will lead to desire and desire to volition and action." And it is in action, in ethical

conduct, not in knowledge by itself, that man's worth finally resides. Not only is it the teacher's task to find the path from one idea to another but rather to build up those groups of ideas which he hopes to make dominant and permanent in the life of the pupil. This he can do through the laws of association, using both the primary laws such as contiguity, similarity, and contrast and the secondary laws such as frequency and vividness.

Even in repetition, under the law of frequency, presentations are not merely repeated. Presentations must be supplemented by analysis and synthesis. Only that can be effectively presented which is similar to what has been directly observed. Herbart had learned from Pestalozzi the importance of observation and direct experience. Pictures, models, and descriptions must be used if the pupil has no sufficient background of experience. The principle which Herbart announced is that the presentation should be so vivid "that the pupil will imagine that he has a direct sense perception." Analysis proceeds by taking apart experiences or events, making them clearer by separating them into elements, and finding essential relations. Synthesis builds up from the elements new and ever more far-reaching combinations. Art, science, history are examples of such syntheses which the race has made inductively. (In the same way the pupils, on a very small scale of course, may start from their own experience and by observation, experiment, reading, and in other ways may build up systematic masses of ideas by the process of apperception.)

It is clear that this many-sidedness of interest requires time. The necessary ideas can be acquired only by successive efforts; and time is also required for combining ideas and for assimilation. Some teachers lay more stress upon explication, step by step, together with reproduction by the pupils, some teach by conversation, some ask for summaries and general statements, while others are not satisfied until the pupils engage in independent thinking. Various methods of teaching will thus arise and all will be valuable when appropriately used. Each may contribute its share in aiding the development of the pupil. Some teachers begin with (1) the explication and analysis of the material before the class and proceed through (2) a synthesis which was begun in conversation to (3) a simple generalization which will furnish opportunity for (4) independent thought by the pupil. Herbart called these steps clearness, association, system, and method.

✓ 5. THE DOCTRINE OF THE FORMAL STEPS

The systematic planning of lessons or larger units had been treated by many earlier writers. Creative workers in other fields than teaching also dealt with the sequence of steps by which they attained their results.

Cicero, for example, in the *De Oratore* dealt with the parts of an oration as these were outlined by his Greek teachers. This, he said, is not a very abstruse study, "for who would not understand without assistance, that nobody can make a speech unless he has settled what to say, and in what words, and in what order, and remembers it?" Herbart likewise threw out somewhat casually the suggestion of his four steps as an outline of the process by which the mind acquires knowledge and reaches conclusions. But the Herbartians seized upon this outline, expanded the four steps into five, namely, preparation, presentation, comparison and abstraction, generalization, and application, and made an utterly deadening rule out of this sequence. Herbart knew, as every good teacher knows, that teaching must not be stereotyped, must not lack the element of surprise. Cicero also divided the model oration into five steps. They were: winning the favorable attention of the audience, stating the case, presenting the evidence, making the argument, and stating the conclusion. It is not necessary to suppose that either Herbart or the Herbartians modeled their steps on the Ciceronian outline. Copernicus, who is not likely to have copied the *De Oratore*, gave a comparable series of steps in an account of the method of his great discovery. He said, as we explained more fully in Chapter 8, that he had become dissatisfied with the complexities of the Ptolemaic system; that he then gathered all plausible suggestions from the writings of previous astronomers; that, from all this body of knowledge, he formed his own hypothesis; and finally, that he verified it by fitting the known facts of the solar system to his theory.

With these examples before us we can better understand the relation between the Herbartian steps and John Dewey's steps in the process of a complete act of thought as described in his famous little book, *How We Think*. We may set the three series in parallel columns, as follows:

Herbart	Herbartians	Dewey
CLEARNESS	{ PREPARATION PRESENTATION	{ COMING UPON A PROBLEM OR DIFFICULTY GATHERING DATA
ASSOCIATION	{ COMPARISON AND ABSTRACTION	MAKING A HYPOTHESIS
SYSTEM	GENERALIZATION	DEVELOPING A THEORY
METHOD	APPLICATION	VERIFYING THE THEORY

It is obvious that Dewey's analysis of the act of thought deals with the process of investigation and discovery and resembles the Copernican account more nearly than the Ciceronian. Equally clear is the general similarity of the Herbartian scheme to Cicero's. It is evident that one group, Copernicus and Dewey, dealt with concrete problems in the natural

sciences while the other group dealt with language, literature and logic, to which inductive trial and error methods do not so readily apply.

Herbart did not regard the steps as a fixed scheme to be invariably followed and, in particular, he did not propose to have this scheme carried through in each lesson. He indicated that with changes in the subject matter the teaching process must vary. Too often these warnings were not heeded. The formalizing tendency which lies deep in human nature, especially in second-rate human nature, came to the surface. The "five formal steps," which Herbart never framed or named, and "model lesson plans," an idea with which Herbart never had any connection, were introduced into the normal schools and taught as mechanical devices. Schools for teachers required inexperienced young candidates to make model plans and teach model lessons in the practice school as if the problem of Comenius, namely, how to teach all things to all pupils, had been solved at one stroke and as if a unique answer to such a question were possible. Herbart held no such misconception; but even more absurd is the error of writers who make the formal steps the chief feature or even the whole of Herbart's philosophy of education.

A corrective to that ignorant misconstruction can be found on a near-by page of the *Outlines of Educational Doctrine*. Herbart, the supposed intellectualist, dealt with teaching as an art, which is the true view. Teaching is an art and like other arts, such as good conduct or painting pleasing pictures, it can be taught and it cannot, it is based upon science or exact knowledge and it is not. The teacher, like any artist, can learn much from other artists in comparable fields but he must develop his own methods. The arts most closely related to teaching are the medical, psychological, political, and literary arts. Herbart, in the example to which we have referred, compares teaching with written exposition. He wrote:

The teacher should by all means study literary masterpieces for the purpose of learning from great authors how they escaped from these difficulties. [The difficulties to which he referred are such as monotony, sudden change of subjects, overly rapid pace, talking down to or over the heads of pupils, and similar teaching sins.] That the teacher may strike the right chord in the earlier stages of instruction, he should turn particularly to simple popular writers, Homer, for example. . . . Classic writers seldom take sudden leaps and never stand still entirely. Their method of unfolding consists in a scarcely perceptible, at any rate an always easy, advance. They dwell, indeed, long on the same thought, but nevertheless achieve, little by little, the most powerful contrasts. Poor writers, on the contrary, pile up the most glaring antitheses without other than the natural result—the antagonistic ideas expel each other and the mind is left empty. The same result threatens the teacher who aims at brilliancy of presentation.

The author of that paragraph did not intend to restrict teaching to any formal "plan," "system," or "steps," because he realized that it is an art.

✓ 6. HERBERT ON THE CURRICULUM

The word interest may be taken to refer to a process, being interested; or to a condition, having interests. One is interested when he is actively pursuing; one has interests when he is the sort of person who, under given conditions and with a set stimulus, will actively pursue. Being interested leads, according to Herbert, to having interests; and having well-selected, manifold, permanent interests is the precondition to inner freedom and virtue. The selection of interests to be developed can be made from two fields, the external world of nature, and the inner world of human nature and social participation. Interests stemming from the external world are mainly matters of knowledge and practical skill but the interests in humanity are participatory interests, that is, interests not in making and controlling but in taking part, cooperating, and belonging.

The expansion of the pupil's interests is not to be haphazard and unconditional. The pupil's individuality is to be preserved and yet a reasonable balance is to be sought. The interests are not to be merely superficial and diffused but are to be organized and integrated as suggested in the previous paragraph. Instruction must guide and deepen experience, thus gradually overcoming the casual and accidental nature of unguided activity. And the pupil must not be allowed merely to mark time. To be tedious is the greatest of teaching sins; and tedium is avoided by a carefully adjusted but ever expanding and deepening course of study.

Since our ideas have two main sources, nature and mankind, the curriculum of the school must draw its materials from these. Herbert stressed the second or the humanistic side to a far greater degree than Pestalozzi and the naturalists. These had emphasized the practical skills but had not, of course, been able to dispense with language. Herbert placed the languages, literatures, and history on an even plane with mathematics and the sciences. He said that an education which neglects either the humanities or the sciences is lopsided. He emphasized the comparative study of languages but recognized that not all children have time for extended language study. He realized that the relative importance of Latin and Greek was decreasing. He said that "the labor implied in the study of the ancient languages pays only when talent combines with the earnest purpose to achieve the most complete scholarship." The study of the ancient languages should be based upon ancient history. He leaned toward Quintilian's proposal of beginning Greek before Latin. The study of history may begin with biography and stories; and the *Odyssey* is the best of all Greek stories. The young teacher of history must practice the telling of stories and must at all cost avoid prolixity and boredom. Teaching is a

fine art and no cost of labor is too great in preparing for it. The stories of Herodotus should serve the teacher as models to be imitated in teaching. "In fact, they should be actually memorized," said Herbart, "in an accurate but fluent translation. The effect on children is surprising." All possible concrete helps in representing historical ideas to the senses, such as portraits, pictures, maps, and charts, are to be used. With history are to be taught geography, chronology, literature, and politics. A brief, well-proportioned history of inventions, arts, and sciences should be included. Cause and effect should be carefully traced, for, as Herbart said, "History should be the teacher of mankind; if it does not become so, the blame rests largely with those who teach history in schools."

The elementary teaching of mathematics and science must be inductive, objective, and practical. Mathematical study should begin with counting, measuring, weighing, training the senses in estimating distances, angles, and other magnitudes, and combining simple computations with these exercises. This work in mensuration, accompanied by plane geometry and algebra including quadratic equations, is to lead directly to trigonometry. The young student of the newer ideas of mathematics teaching may be surprised to learn that Herbart, over a century ago, stressed the need of "impressing far more deeply the concept of proportion, demanded even by elementary arithmetic, and also for developing early the idea of function." Herbart also dealt with the very important educational question, how far and for whom rigid demonstrations are necessary; and he concluded that only students who can become thoroughly familiar with the whole range of the concepts involved should bother with logical derivations and proofs. The practical student should be taught how to use logarithms without much attention to the underlying theory. After a comparison of arithmetical and geometrical series, practical application will immediately follow. Herbart recognized that it would not be too difficult to teach Newton's binomial theorem and the theory of logarithms but he doubted whether this would be worth while except for those who would continue in advanced mathematics. Along with elementary mathematics, a good deal of elementary science should be taught, some astronomy, physics, the construction and use of instruments, and manual training. "Every human being ought to learn how to use his hands. The hand has a place of honor beside language in elevating mankind above the brute." These examples will be sufficient to illustrate Herbart's treatment of the curriculum.

The student will have noticed that subject matter and methods of teaching are often treated together. They are always closely related. Geometry can be taught inductively or deductively but it will not be the same subject; and so every method affects the content and meaning of the ma-

terial to which it is applied. Implied in a curriculum are not only methods and purposes but also organization and sequence of materials. Besides the logical ordering of the material and its usual adaptation to the age of the pupils, Herbart proposed three other principles for curriculum organization. These are correlation, concentration, and the culture epochs principle. Correlation has already been illustrated in the proposal to combine the teaching of mathematics with its application in physics, manual training, and other fields. Geography, as treated by Herbart and his disciples, provides another example of correlation and also illustrates concentration. He called geography an associating science. It brings together the sciences, the arts, politics, and history. Under concentration, he included the ideas which we now associate with a "core curriculum." The ideas of correlation and concentration are not to be too sharply distinguished, for concentration is merely a more systematic and closely knit correlation.

The culture epochs theory was not original with Herbart. In fact, it had a long history reaching back to Clement in ancient Alexandria and it attracted renewed attention after the Renaissance. Lessing, Herder and many others were captivated by the notion. Culture epochs are merely, as the name literally says, successive epochs or stages of cultural development from primitive conditions through nomadic, early agricultural, and other periods to modern civilization. One may call this evolution of culture, as Lessing did, an education, the education of the human race. By long and often disastrous trial and error man has learned to live in the way he lives now! That has been a racial education, the education of mankind. The culture epochs theory supposes further that each child coming into the world begins as a little primitive and gradually attains maturity and civilization by passing through a series of stages which parallel those of the human race itself.

The culture epochs theory, we have said, was not originated by Herbart; and while he referred to it, he made practically no use of it. But the Herbartians Tuiskon Ziller, Wilhelm Rein, and several Americans based whole curricula upon it. The culture epochs theory has been given up. Rousseau, Pestalozzi, Herbart, and Froebel were all attracted by the possible applications of the theory. It was the followers of Herbart who, in a period of enthusiastic Herbartianism, built imposing culture epochs curricula, but these have been taken down long since and stored in a dark closet in the basement.

7. TRAINING

We must recall that for Herbart education consisted of three divisions, government, instruction, and training. Training is largely a matter of tact

and skill. Harsh methods of discipline and also the isolation of the child from all possible temptation must be avoided because the pupil is to learn self-direction and self-control. A firm will can be developed only by exercise. The opposite extreme must likewise be avoided for laxity and exposure to evil may lead to moral shipwreck, and hence the need for tact and skill in the teacher. It is his function to give enough of the right kind of direction to keep the right ideas in the center of the pupil's attention. Often also the teacher must awaken inspiration and resolution by some "rousing word," some noble ideal, or some appealing example. Argument is not to be recommended as a means of forming character. And the teacher cannot do everything. The pupil must also live with his equals in age and attainments and the school must provide a helpful social life. Herbart, without developing the idea, even suggests the establishment of a school republic, a rare but not new idea at that time. Children must be encouraged in the frank expression of their opinions however erroneous these may be. Children are often very positive and dogmatic in moral judgments which are mistaken, for the young have no idea of the variety of ethical views which have been held and disputed. The cure for such arrogant self-confidence is instruction, wider and deeper knowledge. The great function of training is to enable instruction to become effective in developing character.

We must notice that Herbart's pedagogy, like John Dewey's, did not emphasize physical education, although he recognized the need for exercise and recreation. But physical education cannot have a commanding place in a pedagogy so largely based upon ideas and the pure intellect as Herbart's and Dewey's systems are. This is a major point of attack upon the theory of Herbart, especially by those educators who emphasize the importance of physical training for the formation of character, the very aim which Herbart had chosen. To attack Herbart successfully one must lay siege to the foundations, his intellectualist psychology and conservative social principles; otherwise he is less vulnerable.

✓8. THE INFLUENCE OF HERBART AND THE HERBARTIANS

The activity of Herbart as a philosopher and educator fell into the Hegelian period. Hegel was only six years older than Herbart, and his system so completely lighted up the philosophical skies that all other stars were obscured. When Herbart's first general work on education appeared, in 1806, everyone was engrossed in the works of Fichte and Hegel, and Herbart somewhat plaintively wrote: "My poor pedagogy has not been able to lift up its voice." Thirty years later, he still felt that he had not obtained a fair hearing. And yet he had a number of important disciples, especially in

Austria but also in Germany. In Austria, W. F. Volkmann was doubtless the greatest. He did some work in the measurement of sensation and in 1856 published an important textbook of Herbartian psychology which remained for two decades the standard work and included not only a systematic treatment but an elaborate review of the literature and the history of its subject. Volkmann's slightly younger friend, Gustav Adolf Lindner, wrote (1858), and several times revised, a textbook of *Empirical Psychology*, which followed Herbartian lines. It was intended for young students of education and was long the standard text in teachers' seminaries and normal schools. The first American edition, translated by Charles De Garmo, was published in 1889, the year before James's *Principles*.

In Germany proper, the universities of Leipzig and Jena became leading Herbartian centers. At Leipzig, Moritz Drobisch attempted to develop the mathematical methods of Herbart's psychology. He helped to bring Wundt to Leipzig and taught Herbartian philosophy to G. E. Müller, who was to become one of the greatest of experimental psychologists. Drobisch had a colleague in Leipzig in Gustav Hartenstein who became the general editor of Herbart's *Works*, issued in ten volumes. A real renaissance of Herbartian doctrines occurred in Germany about 1865, and in the United States his greatest influence developed twenty years later. The American influence of Herbart will be treated when we come to speak of education in the United States. This chapter has dealt with one of the great educational system builders; and we shall next deal with another, Froebel.

Herbart was a practical schoolman and teacher and the value of his philosophy lies rather in its details than in its outlook. He regarded teaching as an art which was based upon ethics and psychology. The task of ethics was to define virtue, and virtue became the goal of education. Psychology explored the mental processes and explained the methods and conditions of learning and thus indicated both what the teacher should do and how he should proceed. The psychology which Herbart developed was a form of associationism. He modified the older account of a purely mechanical association by ascribing self-activity and force or assimilative power to ideas. At this point, he was under the influence of Leibnitz who also suggested to him the notion of the apperception mass.

Education, according to Herbart, has three phases, government, instruction, and training. Since the mind is really composed of ideas implanted by instruction, it will be evident that instruction is by far the most important educative function. This, in turn, leads to the charge that Herbart's system is an intellectualist and individualist system. His emphasis upon the social virtues and upon a full circle of interests including the humanistic and historical interests and upon social action and conduct refutes the charge of individualism. To repel the charge of intellectualism would be more difficult although he includes pupil self-government and manual education in his program.

The child can be educated only if he becomes active and interested. To de-

velop a wider circle of interests we must begin with those which are already present. Through the laws of association those groups of ideas which are to become permanent may be built up from present ideas and interests. In this process of building up permanent idea masses we should follow the general steps of mental activity. These are called clearness, association, system, and method.

To develop individual and also social virtue the school must stress both scientific and humanist ideas. To keep these from developing in departmentalized groups, the principles of correlation and concentration should be followed in organizing the curriculum. Until the child's good tendencies are sufficiently strong he needs the support which comes from government by reasonable authority and from training which leads to firm habits.

QUESTIONS

1. Examining several books on educational psychology, make a list of the chief topics treated in them. How is the topic "learning" related to the others?
2. Does the doctrine of association concern itself mainly with memory? What function does memory have in the educative process as a whole?
3. Compare the psychology of Herbart with that of Rousseau. Does learning as a process of discovery imply the forming of associations?
4. Is the individual, as Herbart views the matter, completely determined from without, by the ideas which his environment implants? Compare Herbart on this point with Helvetius and Rousseau. Can he escape from this trap through his doctrines of virtue, of the self-activity of the ideas, or of interest?
5. How does the doctrine of association apply to teaching?
6. What are apperception, correlation, concentration, and culture epochs? Find illustrations and applications.
7. Why do writers independently listing the steps in a process of thought or in constructing a work of art usually arrive at similar conclusions?
8. What facts would you assemble to show that teaching is an art?
9. If teaching is an art, how should the "formal steps" be used?
10. How does the Herbartian curriculum compare with those of (a) Comenius, (b) Rousseau, and (c) Pestalozzi? In making this comparison do not omit consideration of physical education, manual skill, history, language, and literature.
11. How similar were the views of Locke and Herbart on what the latter calls (a) government and (b) training?

FOR FURTHER READING AND STUDY

Most of the following works are translations or paraphrases and they usually contain introductory and editorial matter in addition to the text. A general edition of Herbart's writings in twelve volumes was published at Leipzig (1850-1851), under the editorship of G. Hartenstein. The publications of the Herbart

Club and Society and the files of educational magazines issued between 1890 and 1910, especially the *Educational Review*, edited by Nicholas Murray Butler, contain a great deal of material on Herbart and the Herbartian movement in the United States.

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12 NEW SYSTEM BUILDERS: FROEBEL

FRIEDRICH FROEBEL WAS THE CREATOR OF A COMPLETE scheme of education which, beginning with the early years, extended through adolescence. This scheme was based upon an activist psychology. Because he was in his latter years so exclusively engaged in the development of the kindergarten, the rest of his contribution is sometimes forgotten. In this chapter we shall be concerned with the general history of the infant school, kindergarten, and nursery school movements but also with Froebel's broader theory of elementary and secondary education and with the underlying psychology.

Others had begun to deal with the education of small children. Comenius had written of the "school at the mother's knee" and had, at least to a slight degree, anticipated the kindergarten. The need for better child care had been noticed by Locke and Rousseau. In some poor districts of eastern France, the infant school was developed before the French Revolution. Pestalozzi instructed mothers on the education of their children. A new attack upon the problems of early education was made by Froebel, who may in this respect be called the greatest of the Pestalozzians. Thus three of the greatest modern educators, Comenius, Pestalozzi, and Froebel, each wished education to begin in the earliest years. Froebel declared that education should be based upon the psychology of the growing child. The kindergarten propaganda encouraged the genetic study of children; and kindergartners often became eager students of child development. Herbart and Froebel were both psychological thinkers, but while Herbart emphasized the psychology of instruction and conscious learning, Froebel directed his attention to the means for encouraging the natural growth of the whole personality.

Rousseau had pointed out a dualism between the individual as a man and as a citizen; and proposed to remove the child from society to protect it and preserve its personality from the evil and destructive influences of the world. The new movement for infant education followed Rousseau on

the whole but without using his radical measure of withdrawing from society. Froebel, at all events, intended to cultivate the personal and native traits of the child, holding that there is no necessary conflict between the individual and society. The founders of the great national school systems, on the other hand, thought otherwise, namely, that if there is conflict it must be resolved in the interests of the state. Education of the individual "for himself" had to wait for a later day.

With the attempt to educate very young children, a new problem was presented to teachers. When children were not admitted before the ages of six or eight years, many of their habits were already formed and they could be treated almost like adults. With the admission of three- to five-year-olds, the situation changed. For these a new kind of institution was required in which attention would be given to their inability to sit still and to deal with symbols, and to their lack of common social development. Obviously, a new kind of school was needed and one was gradually evolved. Historically, it passed through three stages, the infant school, the kindergarten, and the nursery school. We omit from consideration the dame school, and the crèche or day nursery, because these did not attempt to make any thought-out adjustment to children's needs. Schools like the kindergarten which did try to meet the demands of small-child nature developed new principles, methods, and materials and these have spread to other fields. The new education, called progressive in the United States, has been influenced by the kindergarten movement. Through the kindergarten, women gained a larger professional place in education and the alliance between home and school was strengthened; the elementary school was transformed; and the general philosophy of education was fundamentally modified.

1. INFANT SCHOOLS

The earliest type of school to make special provision for the needs of small children was the infant school. Literary anticipations of this institution began to appear frequently in the seventeenth century. Thus John Valentin Andreae in his *Christianopolis* (1619), John Amos Comenius in his *School of Infancy* (1633), and Samuel Gott in his *Nova Solyma* (1648), and in the following century the Edgeworths, Pestalozzi, and others conceived new ways and a new spirit in infant care and education. All, however, proposed plans that were to be carried out by the mother in the home. Many poor homes or ignorant parents were not able or anxious to introduce such plans; and in a peculiarly destitute locality, humanitarian feeling and evangelical piety led Jean Frederic Oberlin (1740-1828) to open an exemplary infant school at Waldbach in eastern France in 1769. Oberlin

employed young women, first Sara Banzet and soon after Louise Scheppler, to teach the children to play and, the older ones, also to spin, knit, and sew. Pictures, nature study, collecting, singing, drawing, and simple hand-work were introduced and the children were taken on walks to gather flowers and other interesting natural objects. Oberlin's work, although it was undertaken under great difficulty and against much local opposition, did not remain unrecognized. The French government awarded him a money prize and French and Germans paid him the sincere compliment of imitating his institutions. The *salles d'asile* of Paris (1801) and the infant school established at Lippe-Detmold by Princess Pauline and named after her, the *Paulinenanstalt*, are good examples. The humanitarian, Professor Wadzeck, of a Berlin classical school, opened an infant school in 1819. An even more famous instance was provided by Pastor Theodor Fliedner who opened an infant school at Kaiserswerth on the Rhine (1835), a normal school to prepare young women for work in such schools, and the first nurses' training school. Humanitarians roused by Pestalozzi established infant schools in many European countries and these paved the way for the kindergarten.

Oberlin is one of the heroes of the teaching profession. To compare him with Pestalozzi is an obvious thought. Both were social reformers, deeply moved by the miseries of the oppressed and the poor. More practical than his greater contemporary, Oberlin worked on a much smaller scale. He improved the agriculture of his mountain valleys, organized a farmers' club, introduced new plants and trees, imported better seeds from abroad, established a nursery for fruit trees, and developed the cultivation of the potato. He persuaded his parishioners to build a road and a bridge across a mountain chasm—the "Bridge of Charity"—to provide a way for wheeled vehicles out of the valley into Strassburg. In the French Revolution he was a wise and liberal leader of his flock in difficult times. Nothing was neglected that could improve the income, homes, and lives of his peasants. He dealt effectively with local problems, but his writings had no influence and have indeed never been collected and published. We have dared to compare him with Pestalozzi as one compares the small but excellent with the great. Pestalozzi is a world figure; Oberlin was the kind of wise and active leader that is needed in every community. By a curious circumstance and almost by accident, the name of this French educator and pastor, who was once on the point of emigrating to Pennsylvania, has been given to an American college. All teachers would do well to read and meditate the career of Jean Frederic Oberlin, the founder of the infant school in the valleys of the Vosges mountains.

The rise of the infant school under Robert Owen about 1800 may have been independent of the continental movement. One cannot be sure. Its

spread to England and promotion by Samuel Wilderspin and its return to Scotland and propagation by David Stow followed. From a very favorable account of the Stow variety of infant schools, we gather that the physical health and habits of the children were carefully attended to; lessons were illustrated with objects and pictures which were preserved in the schoolroom; habits of cleanliness, order, and obedience were instilled gently but persistently; the children's duty to God was not neglected. All was joyous activity: short recesses with plays and games every fifteen minutes and one-third of the time spent in the playground in swinging, running, singing, or building castles out of wooden blocks. The infant school, we are told, made the schoolroom, a nursery and a playground.

In England the infant schools became especially popular because the early beginning made possible a little longer period of instruction before children were sent into the factory. And they also tended to emphasize the formal skills of reading, writing, and arithmetic. By 1870 when public school boards were established, the infant school had become a fixed part of the English system; and they usually became independent departments with a separate course of study.

Leadership in the British infant school movement soon passed to the Home and Colonial School Society. This brought the movement into close contact with Pestalozzian influences, which were then affecting education in all western countries. Accounts of such schools appeared in the *American Journal of Education* in 1827, but their greatest propagandist was Henry Barnard. His description in the first volume of the *Connecticut Common School Journal* admirably shows their Pestalozzian qualities. He wrote:

Infant schools, though they are very different from each other in a variety of respects, generally agree in a few material particulars. Low seats with backs are provided; healthful and pleasing physical exercises are practiced; singing is a frequent occupation; the study of natural history is pursued either by means of sensible objects, such as leaves, fruits, shells, or with pictures of them, or at least with books which give easy accounts of animals, plants, minerals, with questions adapted to recitations. Writing, and often drawing, on sand or slates, is generally practiced; the manner of teaching is generally more varied, enlivening and parental than in some of our other schools; and the discipline is commonly more mild; while religious and moral instructions are more frequent and familiar.

Probably no teacher ever entered an infant school for the first time without receiving hints of importance on some point of instruction or discipline.

The infant school was after all a school, not a nursery, but also not a playground or a children's garden, that is, its chief defect was that it was too eager to teach reading, writing, and arithmetic. That some of the best avoided this error is shown in Barnard's account but one must not miss the anticlimax of his description: from objects, to pictures, down to books

with recitation questions. Truly, *facilis descensus Averno*. There was still something left for Froebel to invent.

The founder of the infant schools in Italy, Ferrante Aporti (1791-1858), was born in a small town near Mantua. He opened a school for little children in Cremona in 1827, about a decade before Froebel began developing his kindergarten. He tried to provide for the children's health and physical development, for gymnastics and recreation, and for daily occupations according to age. He aimed to cultivate the sentiments and emotions in a friendly, homelike setting, and devised many exercises to train the senses. Doubtless he was influenced by Pestalozzi, but much of his work was original. His schools were approved by the government of Milan and spread to other cities. In 1833 he issued a *Manual* which was to aid in the extension of his system beyond his personal influence. His fame spread to France where he was created a Chevalier of the Legion of Honor. For a time he held a university position at Turin. But his hopes for the reform of Italian primary education were not to be fulfilled. Reactionaries in church and state attacked him because they thought they discerned liberal tendencies in his infant schools, an experience which Prussia was to provide for Froebel also. Aporti fled to France, a sacrifice to the conservative reaction against the revolutionary movements of 1848.

2. EARLY EDUCATION OF FROEBEL

The creator of the kindergarten, Friedrich Wilhelm August Froebel (1782-1852), was the son of a pastor in a Thuringian village. The boy's life was somewhat lonely but the story of great unhappiness and cruelty is a myth. The poetry of nature early found its way into his romantic spirit and stimulated his interest in elementary science and natural history. His brother Christoph, to whom he stood in an especially close relationship, helped him to solve some of his puzzling questions. Still the boy was lonely and at the age of ten was taken to live with an uncle, his mother's favorite brother, where he had more freedom and more attention. He always looked back to these four or five years as one of the happiest periods of his life but school did little for him. He was not good at games, and was a bit lonesome even among forty boys. The teaching was abstract and over his head but he did well in arithmetic. This interpretation of Froebel's boyhood may be supported from his own words. "The kindly influences of my youth," wrote Froebel to his brother, "gave me a freedom which broadened my views, increased my strength, and developed my inner life." The opposing view of Froebel's early life, for there is an opposite one, seems to be a rationalization. The young Froebel was a dreamy, poetic, highly sensitive lad, in love with nature and inquisitive about natural phenomena, religious minded, and

hungry for companionship and friendship. It was not surprising that some considered him lazy, although in later life he manifested great activity.

Confirmation over, he was apprenticed to a forester because his father could not afford to send another son to the university nor to pay the high premium which was demanded by a first-class agriculturist for taking him as an apprentice. The forester was to teach him his craft, including applied mathematics and the methods of appraising land and timber, but he did none of these things. Friedrich read books on geometry and forestry in his master's library, communed with nature, and became even more of a recluse. He made some observations on plants and insects which he, like self-taught men of all times, considered original and more important than they were. He found nature everywhere connected, every fact and phenomenon leading to some other, and all pointing to an underlying ideal and spiritual unity. At sixteen and seventeen his theistic, half pantheistic philosophy was developing. Later he was to find that this was similar to the views of Schelling and K. C. F. Krause. His study of mathematics developed a longing to work with the university teacher who had written these interesting books.

Almost by accident he found the opportunity to go to the University of Jena; and while he continued his study of mathematics, his interest now came to be centered on science. His most stimulating teacher was Professor A. J. Batsch, sometimes called the "German Huxley" because he taught comparative zoology and demonstrated the similarity in the plan of the skeletons of the vertebrates, fish, birds, and mammals, including man. The ideas of evolution which Froebel gathered in this study helped him to mature his theory of the unity of all things, of the organic nature of the world, and of the correspondence of part with part. His study at Jena came to a close with a nine-week term in the university prison for debt.

After some experience in teaching and an extended period with Pestalozzi, Froebel also studied at Göttingen and Berlin. At Göttingen he undertook to trace the culture epochs through the development of language but discovered that neither his preparation nor his linguistic ability were sufficient for this purpose. He continued to believe in the correspondence of individual development with the racial stages. Another unhappy outcome of those studies was his attempt to connect the sense and the sound of words. The resulting grotesque word plays which he included in the *Education of Man* spoil a number of its pages for the reader. After about a year at Göttingen, Froebel settled down at the University of Berlin in the summer of 1812. He was employed in a famous Pestalozzian school in the city maintained by Plamann, whose acquaintance he made through Father Jahn. Most of his time was spent in study, especially with Professor Weiss in crystallography, and he became curator of a museum of minerals. The

regularity of the crystals, like the similarity of the vertebrate skeletons, further directed his mind to the idea of a universal plan and law of creation. Goethe's work on plant structure, Krause's and Hegel's philosophies also led him in the same direction.

Following analogies, and arguing that "if man is ever to fulfill his destiny he must be trained in accordance with the laws of his development," he finally evolved his law of human growth and education. This he called the "reconciliation of contrasts." Froebel regarded activity as life's essential characteristic and the human being as primarily an active organism; and, therefore, the contrasts which are to be reconciled had best be taken as opposing activities. Such activities are those in which we mutually work and share for group ends; and, on the other hand, those which are personal expressions of interests, urges, and ideas of the self. Harmonizing these divergent activities leads to individuality.

Between the beginning and the end of his university study, 1799-1816, Froebel engaged in many kinds of practical work. His education was by no means obtained in the lecture rooms and laboratories only. He carried on private study in German literature, in anthropology, and in architecture, he worked on a farm, he managed an estate, he served as private secretary and accountant to a large landowner, and in all these occupations, which he performed to the satisfaction of his employers, he met many stimulating people. One of these suggested that Frankfort-on-the-Main would be an excellent place to study architecture. He reached Frankfort in June 1804, and obtained employment with an architect; but he was not satisfied. He felt that he really wanted to work with people, to build not houses but men. Even his work in architecture appealed to him because it was a means to the aesthetic culture of the people; even as an architect he considered himself a teacher.

Opportunity to work with children was now at hand. A successful Pestalozzian teacher in Frankfort, Gustav Anton Gruner (1778-1844), asked him to take a class of boys, nine to eleven years old. In a letter to his brother he wrote that from the first day he felt as if he had always been a teacher. In the short holiday at the end of the term he visited Pestalozzi's school at Yverdon but he came away with conflicting judgments. The curriculum seemed to him to be a patchwork with many gaps, the teaching now good, now mechanical, often without system. When he returned from this vacation visit, a regular position with a contract for three years in Gruner's school was offered him (October 1805) and he entered upon a period of successful teaching which included also an important share in management. His nature study and geography became especially well known and not only within the school. Meanwhile, like Herbart, he became the tutor of the three sons of a wealthy family.

3. FROEBEL AND PESTALOZZI

Enthusiastic for his new calling, Froebel decided to make serious preparation for it. He mapped out a program which included a period at some university, an examination of the work of the great educators, and a year of residence at Yverdon to study the Pestalozzian system. Then he would establish a school for boys on new lines. This program, several times interrupted, required eight years but he completed it.

When Froebel came to Yverdon a second time the school was at the height of its renown. This time he came not for a short visit but for an extended stay. The parents of his pupils having consented, he took the three boys to Switzerland in the summer of 1808. He had conceived the idea of putting the boys into the school while he took general charge of their work and shared all their lessons. Pestalozzi wished to appoint him teacher of geography in the school; but he did not accept, perhaps because it would have interfered with his tutorship. He did teach handwork to a dozen boys who worked with his own pupils. He seems to have had frequent conferences with Pestalozzi. In a contemporary account, he praised the work in sense training and in language as well as the emphasis which Pestalozzi placed upon the part of the mother in the small child's education. Undoubtedly his stay at Yverdon directed Froebel's mind to infant development and had a most important influence upon his later work. Pestalozzi's system of early training and the happiness and industry which resulted would save children from many faults, he said. At this time some of the best work in music teaching was carried on at Yverdon and two of the teachers, Naegeli and Pfeiffer, published a song book for school use. Froebel learned a great deal from Naegeli's lessons and lectures on music. He gained the important idea that singing, movement, and speech are three correlative forms of expression. He made a careful study of the system of music instruction used by these two teachers and the effects can be seen in the kindergarten. He was also influenced by the work in drawing and in practical occupations. The school was, however, already suffering from dissension in the staff and Froebel was more and more anxious to continue his own advanced studies.

4. WAR AND FRIENDSHIP

Froebel transferred from Göttingen to Berlin in the summer of 1812. He secured sufficient income for his studies at the university in the Capital by teaching in Plamann's Pestalozzian school. Connected with the school staff was another of Germany's great educators, Father Jahn, founder of a

famous gymnastic system, who was at the moment directing his outdoor gymnasium and cultivating the patriotic spirit of young Germany. He had indeed become so effective in the latter activity that he roused the suspicions of the French. One day, on the Hasenheide, Jahn spoke to one of his young disciples named William Middendorf about Froebel, an "odd chap" who spent his time drawing the "strangest conclusions from the study of stones and spiders' webs." After they were all in the army, it was Jahn again who introduced to Froebel the young scholar Henry Langethal; and a few days later, Langethal presented Middendorf. These three, Froebel, Middendorf, and Langethal, formed a historic friendship and spent their lives in closest association in the development of the new education.

The world was tense with anxiety and excitement during Froebel's first year in Berlin. Europe was gathering her resources for the great conflict with Napoleon. Hatred of the foreign master and patriotic enthusiasm were ruling passions in Berlin. Froebel was not affected as much as others for he lived a quiet, studious, and very busy life and, besides, he was no Prussian; but he reflected that he was after all a German who was expected to teach every boy that he must be willing to defend his country. Feeling that his example ought to square with the instruction he would give the young in the school which he hoped to set up, Froebel and a group of others including Jahn enlisted in a crack regiment which, as it turned out, saw some active service. His future life-work was always in his mind at this time, and the two friends who were to share in it were the most important result to Froebel personally from the war. His corps was mustered out in the spring of 1814 and he returned to Professor Weiss in Berlin.

5. KEILHAU

The opportunity to begin was now at hand. Froebel's favorite brother, Christoph, had recently died leaving three boys in need of a guide toward a good education. With these as a nucleus, to which he soon added two other nephews, and the younger brother of Henry Langethal, he opened his first independent school on November 13, 1816, at Griesheim. This was close to his boyhood home but the school was moved to Keilhau, still in the same general neighborhood, where it remained. "My plan," he had written, "is very simple; what I want is a happy family school, and a peaceful life with nature around me." The boys were to be taught by educative contact with external nature but also by developing their own individual and human nature through cooperative work and play. It had come to be one of Froebel's dogmas that there was no conflict but a pervading harmony between nature and human nature. He was a mystic seer who saw God in everything and all things in God. Learning was to occur through living

and doing, living with others and doing with purpose. Holidays and celebrations, including the birthdays of the pupils and teachers, were used for educational purposes. The boys made gardens and planted them with the beautiful wild flowers with which Thuringia abounds. There was a form of student government, a sort of patriarchal democracy, with officers, a court, and constitutional forms. Any boy whose mischief or negligence caused property losses had to repair them. The curriculum was flexible and provision was made for boys who wished to enter business but others were prepared for the university.

Keilhau grew slowly in numbers, but the school secured a favorable verdict from a government commissioner who was sent to inspect it. Out of his philosophy and experience at Keilhau, Froebel wrote *The Education of Man* (1826). But difficulties were already threatening the whole enterprise. Froebel had married a well-educated and resourceful young woman, Wilhelmine Hoffmeister, who entered heartily into his plans. Middendorf and Langethal added a great deal to the effectiveness of the school. Langethal taught the boys correct speech and applied Herbartian ideas in the teaching of the classics. Drawing and handicrafts were taught. But new buildings and equipment were needed and the increased staff and facilities required more money. As at Yverdon, divisions appeared within the faculty. One of the teachers turned traitor and, after undermining Froebel at Keilhau, established a competing institution. It was a time of scarcity, almost famine, in Thuringia and the quality and scarcity of food on the dining tables came in for a good deal of criticism. The children had come from the most diverse homes, and pauper and prince were hard to weld into the harmonious school family which Froebel desired. Soon Keilhau was in financial difficulties. A younger teacher, Barop, saved the school from bankruptcy.

At this time Froebel turned toward a new project which had, among its novel features, one that pointed in the direction of the future kindergarten. This project was the ill-fated Helba plan which contemplated a complex institution including a school of art and industry, a higher school for boys for which Keilhau was to serve, an elementary school, a school for mothers, and one for orphan children of three to six years. Froebel in 1828, while the scheme was under consideration, wrote Barop that he had long been thinking of the education of small children and that he was going to include a school for them in the institution which the Duke of Meiningen seemed about to establish at Helba. He said: "I shall not call this an infant school, because I do not intend the children to be schooled, but to be allowed under gentlest treatment to develop freely." The Duke once placed his young son before Froebel and asked how the boy should be educated for his future position. Froebel answered: "With other

children; and as a child, as long as he is a child." The inclusion of parent education was another new feature. In the school for mothers, Froebel intended to teach what the family must do to ensure the early and natural development of its children; and how the elementary school may continue this free, natural education. The third feature of the Helba plan was the inclusion of several kinds of handwork, art, and construction. These were to educate mind and hand in skills, industry, and practical judgment and to prepare children to become active members of society; but Froebel was throughout rather opposed to vocational and utilitarian education, at least as an end.

Froebel wished to use activity as a means of education, not merely for recreation or for vocational training. A half-starved junior lecturer at the University of Jena, J. G. H. Heusinger (1767-1828), had published a book with the title *Concerning the Use in Education of the Children's Powerful Impulse to Activity*, and Froebel's copy of this little work was well-thumbed and annotated. It is also significant that before he invented the name kindergarten Froebel called his embryo institution a "School Based upon the Active Instincts of Children." This is one of the modern roots of manual training and of the activity school; but the Helba plan remained only a vision because the Duke of Meiningen was persuaded by Froebel's opponents to withdraw his support.

Froebel's central idea of education through *Darstellung* is as hard to translate into unobtrusive English as Pestalozzi's *Anschauung*; but it means expression not of one certain kind but of many or all kinds. It means "living out" what is clamoring for utterance in the heart. One gives expression to ideas, emotions, beliefs, desires, and purposes by drawing, building, planning, inventing, and dramatizing, as well as by speaking or writing. Such expression demands cooperation and an audience and group activity. The child must learn to use many languages, the language of sports, of art, of algebra and geometry, and so on, if he would give expression to the world within and understand the world without. *Darstellung* means creative self-expression, and this idea that the child becomes educated through creative activity is Froebel's most important inspiration.

When the Helba plan was abandoned, Froebel went to Switzerland. After several years first at Wartensee and then at Willisau, the government of Berne in 1835 appointed Froebel director of a normal school at Burgdorf. A school of sixty teachers of all descriptions, young and old, father and son in some cases, was organized. There was also a demonstration school and, for the first time, Froebel was able to include classes of children as young as three years. Trying to meet their needs, he began to collect occupations, songs, stories, games, and other materials which would call out their active responses and lead to their natural development. He

was influenced by Spiess who was developing his system of physical education in Burgdorf; but, more important, the ideas of the Helba plan again came to life. Froebel was seeking not merely new methods and exercises. He had caught the grand vision of a unified people in a harmonious commonwealth. The highest purpose of home and state, to which all other purposes were to be subordinate, was to be the development of mankind, that all men might live a "holy, pure and inviolate life." From early days Froebel had considered himself an "educator of mankind," as was already indicated by the title of *The Education of Man*. This education must begin in early childhood. In play, he believed, we have the fullest expression of child nature, and this should be the means of child education. "Play," declared Froebel, "is the great game of life itself in its beginnings." Home and school, on either side of the budding kindergarten, were each to be brought into conformity with his concept of play.

6. CREATION OF THE KINDERGARTEN

Froebel left Burgdorf in the spring of 1836 and was succeeded there by Langethal. The school at Willisau was at this time in the hands of Middendorf and Froebel's nephew, Ferdinand Froebel; and they continued to conduct it for several years longer. When Middendorf returned to the home base at Keilhau and Ferdinand Froebel went to Burgdorf, Willisau was taken over by Swiss teachers who carried it on along Froebel's lines. Froebel himself spent some months in Germany in visiting infant schools which had been founded as a result of the impulse given to the movement by Oberlin and his German disciples. He found the schools conducted by teachers without adequate training and often they were mere day nurseries whose chief purpose was to keep children out of harm's way while the mothers were at work. Eventually, he returned to Blankenburg in his native Thuringia which became the cradle of his new institution.

The problem was to find the best materials and activities and to organize them so that they should form a regular series which would call out and cultivate the children's powers of observation and understanding, and develop their self-activity and self-expression, the "living out" or expressing in life of the children's natural capacities, both social and individual. Froebel's early names for his institution, a "school for psychological education," a "school based upon the active instincts of children," were felt to be unnecessarily clumsy. He sought for a simpler and more expressive name. On May 1, 1840, on a walking tour in the mountains, the desired phrase came to him and he shouted, "Eureka! I have found it. The school is a kindergarten," a garden in which children may grow as naturally as a plant under the care of an expert gardener. It was a fortunate

choice. The name has had a widespread acceptance and has been incorporated into many languages as the title of Froebel's school and spirit.

As materials for the children's play, Froebel selected three forms, the sphere, the cube, and the cylinder. These are the basic Gifts, as he called them. The spheres of the kindergarten were balls which children rolled and tossed; the cubes were used as building blocks; and the cylinders, as a mediating form between the other two, could be used as either stationary or movable elements in the plays. Many elaborate plays were worked out. Squares, triangles, sticks, and rings were included for use in construction. These objects were considered as typical of nature and art and Froebel held the view that nature and art form a unity and that the highest form of this unity is God. The child has in him a spark of the divine fire and is, in his small way, a creative personality as God is the great Creator. Education as self-expression, *Darstellung*, is a creative process through which and in which the child develops. This symbolism, which has been discarded, is best expressed by Froebel himself in numerous passages from which we select three, as follows:

I have not only forms for the child's eyes which are to make him acquainted with the outward world which surrounds him; I have symbols which unlock his soul for the thought or spirit which is innate in everything that has come out of God's creative mind. If the ripened mind is to know this thought, its embodied image must make an impression on the yet unconscious soul of the child and leave behind it forms which can serve as analogies to the intellectual ordering of things. . . .

We must render perceptible to the child the unity of the world, absolute existence, the world within. . . . Such things we have to give the children through the system of ordered games and occupations which I have created. . . .

God clothed His own image in a mass of clay and was not ashamed of his creation; neither will I be ashamed to set forth in little blocks of wood my ideas upon the nature of man.

These passages are quoted in Susan E. Blow's *Educational Issues in the Kindergarten* (Appleton, 1908, pp. 52-53); and in regard to them even that loyal Froebelian asked: "What must any sane person think of an effort to render perceptible not only the unity of the world, but absolute existence? And is not any educator clearly daft who attempts to set forth in little blocks of wood his ideas upon the nature of man?" In our workaday and secular civilization there is little room for mysticism, and Froebel's symbolism has disappeared from the modern kindergarten.

As the kindergarten developed, not only were features which Froebel had regarded as essential, such as symbolism, dropped out but also some new features which he would not have approved were introduced. Charles Dickens, as early as 1855, pointed out the dangers of formalism in the

kindergarten. One type of formalism which Froebel would have opposed grew out of the mingling of Pestalozzian and Froebelian ideas. Froebel never intended that the stories, collections, and nature materials should be used for object lessons. His aim was not knowledge about things, especially not verbalism, but rather the use of things for the accomplishment of the child's or the children's purposes. Yet object lessons were introduced. Nor did Froebel intend that the kindergarten should develop free and unregulated play. His thought was the exact opposite of chance or chaotic self-expression. "In all things," God and man and nature, he had said in the opening sentence of his first book, "there lives and reigns an eternal law." This, one of his key ideas, would, if taken to heart, have prevented the "free play" which for a time characterized the American kindergarten. Free play is perhaps analogous to "busy work" in the elementary school.

7. SPREAD OF THE KINDERGARTEN

The Prussian government, through its Minister of Education, proscribed the kindergarten. The edict (August 7, 1851) was probably based upon a confusion in the official mind between Friedrich Froebel and his nephew Karl Froebel who held socialistic views; but once issued the prohibition was not withdrawn in spite of all that Froebel and influential friends could do. Even a direct appeal to the king was ineffective. Since Germany was not yet united, the prohibition did not apply to the other German states but it made the institution suspected everywhere. And from the Prussian official standpoint the suspicion was, doubtless, justified for the new school leaned toward democracy; and as Georg Ebers, a Keilhau pupil, remarked, in any German legislative assembly the Froebelians would have sat on the Left. Froebel died in the following year (1852) but there is no evidence that the blow, although he felt it keenly, shortened his life as has been asserted. The prohibition was withdrawn in 1861, and the new school for very young children spread rapidly.

The opposition at home may have aided the extension of the kindergarten abroad for its missionaries had to find open doors and sought for them beyond the borders of Prussia and even of Germany. The most famous of these foreign missionaries was Bertha von Marenholtz-Bülów, a titled and well-educated lady with fine personal qualities. She had made Froebel's acquaintance in 1849 and devoted the remainder of her life to the spread of his ideas. Her *Reminiscences of Friedrich Froebel*, translated into English by Mrs. Horace Mann, and others of her numerous writings were read in many countries, and her personal labors were almost as widespread. She worked in Germany for several years but in 1854 went for

six months to England, where Mrs. Rongé had already established a demonstration kindergarten at Prince Albert's Exposition in London. These two women enlisted the support of Charles Dickens, who expressed his high approval of the kindergarten in a paper which he conducted, *Household Words* (1855). Eleanore Heerwart, who later aided in the founding of the International Kindergarten Union, and Adele von Portugall established kindergartens in Manchester. Bertha von Marenholtz-Bülów visited France in 1855, won the approval of the historian Michelet and other well-known French leaders, and through her addresses aroused interest in the kindergarten. The Low Countries had already received the message from other hands but, beginning at the Hague, she worked in Holland and Belgium also. In the latter country, she with others wrote a *Manuel des Jardins d'enfants* which had great influence. Henriette Breyman, who assisted in the preparation of this manual, was called to Switzerland in 1864 where the two cities of Lausanne and Geneva particularly became centers of kindergarten propaganda. The Baroness von Marenholtz-Bülów also worked in Italy where, at Florence, Elizabeth Peabody found her in the winter of 1871. Many of the leaders of the newly unified Italy, including Garibaldi, showed much interest in the new education. In several of the larger cities, Florence, Rome, and Naples, kindergartens and training schools were established.

After all, the kindergarten was first spread in the land of its birth. Froebel, we saw, left Switzerland in the spring of 1836 after establishing his schools at Willisau and Burgdorf. After four months at Keilhau, he moved into a house at Blankenburg where he collected and invented his gifts and handwork occupations, experimenting with the village children. This school was called a "school for the psychological training of young children." From 1837 he published a small weekly called the *Sonntagsblatt*, the Sunday sheet, to spread his ideas. During the following year, Barop and Adolf Frankenberg took some Keilhau pupils to Dresden on a trip and gave a demonstration of the future kindergarten exercises with some small children of Dresden. At Leipzig, where Langethal had prepared the way, they gave a further demonstration. Froebel himself gave demonstrations in Göttingen and Frankfort. Many visitors came to Blankenburg. In December 1838, Froebel and Middendorf helped Adolf Frankenberg open a "play school" at Dresden which he ably conducted for twenty years. The queen of Saxony expressed interest in the movement and asked for a demonstration; and a "christening" of the new institution was held in June, 1840, at which a "Women's Kindergarten Union" was formed. The well-known *Mutter-und Kose-Lieder*, actually suggested by seeing a mother carrying her child about the farmyard and singing to it, was published in 1844. It had been in preparation for years and the first edition, like the

early kindergarten, had a bulky title, *A Family Book for Developing the Self-Activity of Children*.

Assistants, chiefly young women, began to leave Blankenburg to establish kindergartens of their own. There were a half-dozen of these before 1844 in different parts of Germany. Articles began to appear in journals. Diesterweg, the great educator, came and was convinced and his favorable influence was important; and Froebel's travels and addresses helped. Froebel's later years, after 1845, were mainly devoted to the education of young women as kindergartners. The kindergarten as a private institution was well established in numerous places of Germany during Froebel's lifetime.

8. FROEBEL'S PSYCHOLOGY

Many of the features of the kindergarten were based upon the observation of child conduct, but the observation was not systematic and Froebel was not a psychologist in the academic sense. Rousseau had demanded that teachers should study their children; Pestalozzi had tried to take him at his word and kept a record of his son's development for a short period; and Tiedemann had published (1787) observations on the development of the mental capacities of children. But scientific child psychology began in the nineteenth, not the eighteenth century. The doctrine of evolution and the experimental study of physiology formed the foundation stones for child psychology and Darwin himself (1877) published a "biographical sketch" of an infant; but this came after Froebel.

Although Froebel was not a psychologist, he had a psychology. His most fundamental ideas were (1) that education is a natural process; (2) that the child is an organism or organic whole, which through creative self-activity develops according to natural laws; (3) that the individual is an organic part of society; and (4) that the universe as a whole is an organism of which all lesser organisms are members. As the hand or eye is a member and organ of the body, so the individual is an organ of the human race and the race an organ of the cosmic consciousness, God.

The first point greatly interested Diesterweg because it is an essentially scientific standpoint. This concept, he declared, places Froebel among the originators in education. In Froebel's psychology this is, however, combined with the second point, the idea that man from the beginning of life is an organism which realizes its complete development through creative self-activity. The individual, he held, must rise to complete self-activity and full self-consciousness from partial and imperfect stages of both. Through participation in the developing achievements of mankind in their ascending culture stages, he gradually realizes his own full nature and makes his own contribution to the total human achievement.

Creative self-activity through social participation is the basis of Froebel's psychology. His concept of the individual is genetic. The child grows into maturity. He made out five stages, infancy, childhood, boyhood, youth, and maturity, but these are not sharply separated from each other. His concept of the individual is, secondly, an activist concept. The child is by nature a doer; and learning is secondary to doing, out of which it grows. Formal training of the senses, such as Rousseau or Pestalozzi approved, is to be discarded. The senses are used and perception is developed in the course of creative self-activity. Creativeness implies purpose. The individual is partly determined from without, else why a kindergarten, but he also has his own purposes which he works out as far as conditions permit. The child's purposes must not be too closely controlled, yet civilization, the achievements of the race, must guide the growing individual.

Froebel's psychology, therefore, is less analytic and less mathematical-mechanical than that of Herbart or Locke. Biological and evolutionary ideas were becoming prominent though Froebel lived before Darwin. The child, according to Froebel, is "replete with all the active tendencies of human nature" and, in John Dewey's phrase, is "spilling over with interests." These active tendencies and interests first manifest themselves as play.

9. PLAY IN EDUCATION

Little use was made of play in school until men accepted the premise that education should be adapted to the nature of the child. Since it is the nature of the child to love to play, if we can make play educative we shall have gone far in solving the basic problems of method and curriculum. But there are obvious difficulties.

Just what play is, it is hard to say. The word is a popular term for spontaneous activities carried on for pleasure. The activities may be solitary, competitive, or cooperative. The arts and the so-called "instinct of work-manship" as well as games and sports provide examples. In drama, "the play's the thing." In play children imitate adult activities; and in play men revert to the activities of childhood. Play is often defined as an activity in which one is interested and which is performed for the fun of it. Art, exploration, invention, and research may all be forms of play and Froebel, we recall, regarded children's play as the earliest form of the great game of life. This suggests the theory of play formulated by Karl Groos which is noticed below.

Several theories attempt to explain why we play. Four of these may be mentioned. All of them, being formulated by intelligent men, have some measure of truth and value. One of the oldest is the Schiller-Spencer

surplus-energy theory. The poet Schiller, in the twenty-seventh of his "Letters" on aesthetics, said: "When the lion is not hungry, and no beast of prey challenges a fight, his unemployed strength finds an outlet for itself and he fills the resounding wilderness with his bold roaring; his exuberant energy rejoices in aimless display." Schiller's contemporary, the romantic novelist Jean Paul Richter, in *Levana* (1807) called play "the working off of the overflow of both mental and physical powers"; and this once-famous book on education had the most elaborate treatment of children's plays and occupations since Comenius. Herbert Spencer, in his *Principles of Psychology*, held a like view and introduced the phrase "surplus energy." Schiller, writing on aesthetics, directed particular attention to the "play of the imagination."

A second theory was devised by the Herbartian, Professor Moritz Lazarus, of the University of Berlin. When tired, he said, man turns to play for recreation. Play is the restorer of depleted energy. If such play is found in change of occupation, there need be no conflict between this theory and the previous one, although it seems to be a contrast to it.

In his widely read works on the play of animals and the play of man, Dr. Karl Groos regarded play as preparation for adult activities. This theory found the origin of play in instinct. Instincts appear in the child and young animal before he seriously needs them. Thus play is explained as a pre-exercise of native abilities and a preparation for mature life. Play includes those exercises which will develop into the skills that will be useful later.

There is, finally, a fourth theory, sponsored by G. Stanley Hall, who regarded play as recapitulation. When we play we are not preparing for life activities but, on the contrary, are repeating racial history. "The child brings out in play the actions of the cave-man. . . . He rehearses, in play, actions which were vital to the species, ages ago." This is a phase of the culture epochs theory. Again, this view does not necessarily contradict the theory of Groos. It may be that the fundamental activities of the present adult are so like those of his remote ancestors that racial activities may also prepare for life in the twentieth century.

The recapitulation theory has been outlined in the following table.

Cultural Stages	Play Stages
PRIMITIVE LIFE	CLIMBING, SWINGING, BABBLING
SAVAGE LIFE	CHASING, HIDING, HUNTING
NOMADIC LIFE	WANDERING, GANGS, FIGHTING
TRIBAL LIFE	THE ABOVE, PLUS TEAM GAMES
EARLY CIVILIZATION	IMITATIONS OF ADULT OCCUPATIONS

For such parallelism, there is no more than a trace of scientific or historical evidence; but it is, as we noticed in speaking of Herbart, a beguiling no-

tion which has exercised great influence upon curriculum building. Actually little dependence is to be placed upon the periodizing of either the culture epochs or the play stages. The four theories have value in showing the complexity, variability, and highly modifiable character of play phenomena.

Froebel, although not wholly original, is the great exponent of play in education, developing both its theory and practice. He invented the kindergarten, going a long step beyond Comenius, Oberlin, and Apolti. His work has influenced education at all levels by a gradual interpenetration. He saw the child brimful and overflowing with outgoing impulses; and he also saw the child's need for new materials, for companions, and for direction and guidance. The distinction between play and educative work was erased by Froebel; these two are one. The activity of the senses and limbs of the infant comprises the bud, and games, building, song are the early blossoms of child development. Playful but serious activity in the production of some desired objective result is essential. Schools without working hours dissipate the precious energies of the child. Education must not be soft but it must be playful.

This play, which is also work, is important in Froebel's thought both for future industry and for religion; and both demand early cultivation. It is through religion and industry that personality is formed. Religion without industry, said Froebel, ends in visions and dreams; and industry without religion degrades man into a beast of burden and makes him a means, as Kant had said, when he should be an end. From the earliest years mother and father and child are to play together. "Come let us live with our children," and "for them." Speech and activity develop together and before the child understands words he can understand tones and gestures. For the next stage, Froebel prepared the "gifts," number games, rhythmic plays, dances and songs, drawing and geometric studies, and group games involving speech and cooperation. Boyhood is the third stage and its play shows greater complexity and continuity. There is to be more group work and long-time planning. Collecting, gardening, building play-shelters, and boats, exploring, and the owning of personal possessions are prescribed. The child should have his garden, his own room, tools, and books, as means to the development of his individuality.

As the child grows older, these play tendencies must be sublimated, as the psychologist calls it. They must become the attitudes of his normal life. Enterprise, exploration, purpose, and joy in performance are to characterize his later studies and his adult life. This doctrine of play, not invented but most fully developed by Froebel, has had the greatest influence upon educational practice and forms the center of the new education for it is implied in the project and in the whole range of experimental and creative activities which the modern school uses.

10. THE NURSERY SCHOOL

The purpose of the nursery school is sometimes stated to be to provide for the healthy physical and mental development of children over two and under five years of age. Nurture as well as education is, therefore, an essential element of nursery school function. The institution, like the early kindergarten, has often been considered as especially important for children of the poor in congested districts. Children of these young ages had been included in infant schools and day nurseries and some less than four years old in kindergartens; but the establishment of separate nursery schools did not occur until about 1900.¹ The work of Dr. Maria Montessori in Italy and her books, such as the one translated into English under the title *The Montessori Method* (1912), have had considerable influence in developing the nursery school. She laid great stress upon natural development in wholesome and regulated surroundings. The medical and preventive features of her work are pronounced. She was a physician and had also been strongly influenced by Edouard Seguin (1812-1888). Much of her equipment, which seems somewhat formal, was devised for groups of low intelligence. Dr. Montessori emphasized apparatus which could be used by the children themselves without help from the teacher. Much of it is used for sense training and for individual occupation.

In terms of recent and rapid progress in nursery school education over previous conditions, Russia among all countries takes first place. In England and the United States, the nursery school is an evolution from the charity kindergartens such as Mrs. Shaw established in Boston and Dr. Felix Adler in New York. A British example is the one founded by Sir William Mather at Salford in 1873. This was equipped with kitchens and provided meals and baths for the infants and has been called the first nursery school in England. Aided by the new hygiene and preventive medicine, by the new biology and evolutionary doctrine, and by the increasing political power of labor, the nursery schools in England grew slowly until the end of the first World War when public grants were provided in the Fisher Act of 1918. The most noted of the earlier English workers in nursery school development were two sisters, Rachel and Margaret Macmillan, who established a school at Deptford in 1911. Margaret Macmillan's books have been widely read. One of them is *The Nursery School* (1919). "Educate every child as if he were your own," was Rachel Macmillan's principle.

In the United States, nursery schools were begun about 1920 in institutions for the preparation of teachers. Institutes of research in child development with nursery schools for laboratories were established. The New York Bureau of Educational Experiments and the Yale Psycho-Clinic

made studies of the behavior and physical and mental growth of infants. Many agencies became interested, schools of education, private schools, public welfare agencies, and public schools. Within about a decade, the number of nursery schools in the United States increased from none to two or three hundred. Winnetka, Chicago, and Highland Park in Illinois, Pasadena and Los Angeles in California, Grand Rapids and Kalamazoo in Michigan, Rochester and Albany in New York are among the cities in which nursery schools were early introduced into the public school systems. The financial depression following 1929 curtailed many of these services.

Ever since the time of Plato men have said, at least occasionally a wise man has implied, that education should begin with the beginning of life and continue to the end of it; but Oberlin, Froebel, Montessori, the Agazzi sisters in Italy, and the Macmillan sisters in England have at least made a beginning. Assuming that we employ the best available brains and skill, can we think of any better principle to follow than to "Educate every child as if he were your own"?

After we have considered several national systems and the beginnings of American education, we shall see the influence which Herbart and Froebel exerted upon the American schools. Although Herbartianism as a cult had only a temporary importance, several elements of Herbart's thought have had permanent effects in the United States. The influence of Froebel has been more pronounced and more persistent in our country than that of any foreign thinker unless it should be Pestalozzi.

The Froebelian theory was to be a general system, applicable to children and youth of all ages. It was first applied in a school for adolescent boys; and that Froebel gave the most detailed application of his thought at the kindergarten level should not lead one to conceive it as adapted to that age only. Like Rousseau, he based it upon an activist psychology; but he did not propose to take the pupils out of society, as Rousseau did. On the contrary he made full use of group motives and activities in home, school, and community. From this standpoint, Froebel's system of education complemented Rousseau's by providing the richer and more stimulating environment which was denied Emile.

His home and university experience led Froebel to combine views that he had gained from religion, science, and the idealistic philosophy of the time. Especially from the study of comparative anatomy and from "stones and spiders' webs," Froebel drew the conclusion that all nature had a plan; and that the active, creative organism, which a man is, was part of nature. To fulfill this plan, man must be educated in accordance with the laws of his development. The present chapter, in its description of Keilhau and the kindergarten and in its analysis of Froebel's psychology, contains an account of his exercises and methods.

Froebel interpreted education in religious, that is, in theistic terms. The little

child grows by discovering and creating, by expressing in the world and society what wells up in its heart. The child shares, not fully, of course, but really, in the divine nature and, like the Great Creator, it also creates and, thereby, develops.

He interpreted education, secondly, in scientific terms. Education is a natural process of growth through activity. The child is an individual organism but also an organic member of the social whole. It grows by interaction with the physical and by active participation with the social environment.

He interpreted education, finally, in historical and evolutionary terms. The child, the youth, the man contribute to the resources of the race; and the resources of the race are the materials with which the education of the race is carried on. By discovery, invention, and transmission, child, youth, and man build civilization and thus in a historical process, by natural scientific methods, fulfill the divine plan which is the Will of God.

QUESTIONS

1. How did the three types of educational institutions for the smallest children differ in nature and function?
2. To what degree do Froebel's experiences and times account for his views? Is this a significant and answerable question?
3. Compare the relations of Pestalozzi's and Froebel's theories to that of Rousseau.
4. What are the differences between using activities as a means of recreation, of training for a vocation, and of education?
5. Why did Froebel, in developing the kindergarten, collect songs, games, and other materials that were used by the common people instead of inventing appropriate activities?
6. How is Froebel's *Darstellung* related to Pestalozzi's *Anschauung*?
7. If education is growth, what place do knowledge, facts, have in the process of becoming educated? According to Froebel we learn in doing and by doing. Is the converse also true, that by abstract learning we are enabled to perform, to do? Find examples to illustrate these principles.
8. Are some kinds of play more educative than others, and which kinds?
9. How do the theories which explain why people play help to explain the functions of play in education?
10. Was Prussia, considering her theory of government in 1851, well advised in closing the kindergartens?

FOR FURTHER READING AND STUDY

The extensive and still expanding periodical literature on Froebel and the kindergarten can not be noticed here but the *Reader's Guide*, *Education Index*, and other indexes will open the way to some of the American items. There is a considerable biographical literature on American kindergarten leaders. There

are many old and new books on Froebel in German but for these the student must go to the library catalogue, and special bibliographies.

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13 NATIONAL EDUCATION IN FRANCE

WE HAVE NOW REACHED THE GREAT DIVIDE IN OUR HISTORY, which separates the older education, ancient, medieval, and early modern, from those schools and forms of educational control which are familiar to us by personal experience. The institutional mountain range which divides the older past from the present is Nationalism, and its individual peaks and great plateaus are the nation-states which use the school as an instrument of Nationalism. We see around us inclusive educational systems that are maintained and directed by the states. These form a close network of related and connected agencies which cover the entire area and embrace the whole population of the country. All of us as children were compelled, in the absence of legal exemptions, to attend such public schools. In the western countries, and not in them alone, these schools are now so firmly supported by public opinion and established by statute that other possible arrangements hardly come to mind. Yet they are a new phenomenon in history. Inclusive and powerful systems of public schools did not exist anywhere in the world even two centuries ago; and now those earlier conditions have passed away so completely that some historical knowledge and a vigorous use of the historical imagination are needed to understand the transformation caused by the rise of Nationalism.

We may at this point, then, with profit briefly recall how children were educated and how schools were managed before the national era. In all the classical world except Sparta, education was the concern of the family and was conducted according to custom, not law, by tutors in the home or in private schools. State aid was sometimes given, especially in the higher branches, in the Roman empire, but no general attempt was made to promote the education of the people or to regulate the schools. The Emperor Julian during his brief reign attempted to eliminate Christian teachers and teaching; and two centuries later, the Emperor Justinian decreed the closing of non-Christian schools. But in general the ancient laws

and decrees merely served to offer inducements or privileges to teachers and to provide salaries for a very few or to regulate school hours or the conduct of pupils. Roman cities established chairs of letters, rhetoric, and law; but neither the cities nor the empire developed a general system.

With the dominance of Christianity, cathedral, monastic, and other church schools came into being. The church was far more active in the establishment of schools than the state was or had ever been. Charlemagne, however, harbored a conception of the civil importance of education and he even attempted to spread the benefits of church schools to the lay public. His efforts were not permanently or deeply effective but they may be considered to have been a slight anticipation of the later collaboration of state and church in education.

After Charlemagne and particularly after 1100, the church greatly expanded its educational efforts. Important cathedral schools developed in the cities and, in the thirteenth century, universities operating under charters and struggling for freedom from external control helped to make an epoch in the competition of state and church for the support of the rising intellectual classes. Schools under municipal, gild, and other corporate auspices also multiplied. And in the Renaissance-Reformation era, a new period of cooperation and competition between church and state for the promotion of education was begun. The growing nations and their national churches developed joint policies for the support and regulation of schools, not only for the ruling classes but also for the common people. This was the era of parochial schools, of semipublic secondary schools, and of the territorial-confessional universities.

The next step in this evolution no longer involved collaboration between state and church but instead led to the displacement of the church as a main educational agency. Schools became public, that is, they were established and controlled by the state; and to church-controlled schools there was reserved only a minor place in the whole system. In this and the following chapters we shall first very briefly point to the rise of nationalism and shall then trace the evolution of the state systems of several countries.

1. THE RISE OF NATIONALISM

Nationalism developed out of community of custom, feeling, belief, and the sense of a common origin and history; and its most effective carriers are language, religion, and education. In the medieval universities the students who came from particular regions organized themselves into "nations." In more recent times nationalism has added to the older foundations a common political organization and political patriotism, and these have led directly to the nation-state. States based upon nationality hardly existed in

ancient and mediæval times. The loyalty of the ancient Greeks was given to a city-state, not to Greece. The Roman empire was not a nation but an imperial system imposed upon peoples of many nationalities. The Middle Ages had little sense of nationality; and they could not have it because of the dominance of a universal church and a universal language, and the lack of a cultivated vernacular language and a common culture.

To understand modern education, it is important to realize that nationalism is a cultural product which is developed by propaganda and education. The nation and the state are objective facts but nationalism is a condition of the mind. A nation is a people connected by real or at least accepted racial unity, such unity being shown by language, religion, customs, and apparent destiny. The Poles form a nation. The individuals who compose a nation are sometimes called its nationals. A state is a sovereign political body, occupying a definite territory and having a central government. The Swiss state includes nationals of the Italian, French, and German nations. Nationalism, in contrast with these concrete terms, means devotion to national interests and unity, and a nationalist is such a devotee. The height of nationalism would be reached if each nationality constituted an independent state that commanded the complete obedience and loyalty of all its nationals. It is such extreme nationalism which Hitler, Mussolini, and the "one hundred per centers" of all nations have had as an ideal. Nationalism, therefore, implies patriotism, and it is the joining of an accented patriotism with nationality that is new. This is a state of mind that is developed by propaganda and education; and this is the reason why nationalism is an important issue in education. Modern states have used the schools, not merely to cultivate loyalty and patriotism, but also to develop chauvinism and an aggressive militarism.

Modern nationalism developed first in Europe. The Crusades, in which Frenchmen took a most active part, helped to develop a sense of solidarity in the West, particularly in France. The wars of the Christians against the Moslems in Spain stimulated a strong nationalist feeling among Spaniards, especially in the time of Ferdinand and Isabella. The strong monarchy which the Conquest of 1066 introduced into England was modified by the Magna Charta which the nobles extorted from King John, and in the struggle of Parliament with the Crown a high degree of nationalist sentiment was generated. These three countries were among the first to become great nation-states.

It was in France that nationalism developed most rapidly and reached the highest point. Intellectual and political forces aided its growth. The revival of the study of the Roman law had a considerable influence upon the French judicial system. The position obtained by a body of professional lawyers who derived their powers from the king increased the growing

might of the monarchy. During the same period, the right of the king to impose taxes without the consent and against the will of the papacy was affirmed by the Estates General, and that body, and the system of national taxation which they ratified and the standing army which was then created, were all instruments of centralization. This tendency became much stronger during the Hundred Years War. If the Estates General had seized the opportunity during the anarchy that followed the French defeats at Crecy and Poitiers, they might have developed into an institution able like the English Parliament to set limits to the power of the crown; but they were unable to do this and the French monarchy continued in its course toward absolutism. Louis XIV admitted with royal candor that the love of glory took precedence over everything else in his soul. His ministers sought to stimulate the intellectual life of France for the exaltation of the crown, to encourage art, literature, and science, and to refine the civilization and culture of the nation. In this period France occupied the center of the European stage as the leader in thought and action. At last, the centralizing process reached such a point that Louis XIV could pertinently declare "*L'état c'est moi*"; and the cultural eminence of that state was likewise unchallenged.

Absolutism, although it both fostered and was fostered by nationalism in France, is not a necessary stage in the development of national patriotism. It may even be a hindrance to unity when the government becomes, as the French government in the eighteenth century became, high-handed, capricious, and extravagant. The result was the French Revolution, the First Republic, and a messianic enthusiasm in spreading world democracy.

The essential relations between nationalism and democracy are not altogether clear. No patriotism without liberty, said Rousseau. And it would seem that a people which governs itself would have a more intense loyalty to state and nation than one which is governed by a class, a party, or a dynasty; but the intense nationalism of National Socialist Germany and the devotion of many nationalities to Soviet Russia perhaps tend to refute this notion of a natural alliance between democracy and nationalism. In France, however, it was the Revolution which blazoned to the world the doctrine of national democracy and threatened the thrones of half of Europe. John Locke had developed the theory of popular government and he was followed by the American patriots of 1776. Rousseau performed a like function in France and the French Revolution swept away the autocratic monarchy, class privileges, and local provincialism and united the French-speaking people into a democratic national state which undertook the task of spreading democracy throughout Europe and the world. And it was the Revolution which called out the Report of Condorcet and other schemes for universal, secular education.

2. FRENCH EDUCATION TO 1830

The programs of the revolution could not be put into effect immediately. The disorder of the times, the lack of resources and of an effective tax system, the lack of professional lay teachers, and the absence of a national educational consciousness delayed the establishment of universal free education for almost a century. Meanwhile, France was working at this task. The actual achievements of the Revolution were in secondary and higher education. A radical bill by Lepeletier de Saint-Fargeau to create a system based upon that of ancient Sparta was not adopted. The law of Lakanal to establish elementary and secondary schools was ineffective. One of his proposals led to the brief opening in 1795 of the *École Normale Supérieure* and this, when it was re-established by Napoleon, became permanent and is still a part of the University of Paris. It has always been a higher school of science to prepare teachers for lycées. Another law of 1795, named for Daunou and sponsored by the middle class, led to the organization of some primary schools and more especially of secondary or central and higher schools in which the bourgeoisie was particularly interested. The Central Schools which this law established had a distinctly modern and practical curriculum and were later patronized by Napoleon but they were too few in number and too poorly organized to compete with the lycées. Daunou's law might have been more effective but for the foreign wars in which France became involved, but its failure also shows the bankruptcy of revolutionary radicalism which had demanded elementary, not secondary education. The same conservative trend is shown by the dozen or more technical schools, bureaux, and conservatories that were opened in Paris by the Convention. The Convention also adopted the newly devised metric system of weights and measures. From these revolutionary beginnings a national system of education was developed in the course of the nineteenth century.

The interest of Napoleon was in secondary and technical, not in primary education. One of his first acts was the creation of four military schools out of the endowments of the sixteenth-century humanistic school, the *Collège of Louis le Grand*. He also instituted a system of collèges and lycées and within a few years more than four hundred of these were opened or reopened in the whole country. These taught about fifteen subjects including Latin, French, science, and mathematics. They were boarding schools, and while the law defined their curriculum the state, beyond providing the buildings, gave little financial help.

Yet, although private schools continued, this was the beginning of modern secondary education in France. The noted chemist, Fourcroy, was

made Director-General of Public Instruction with three superintendents of secondary studies. The same law of 1802 established special schools of medicine, law, and science. And Napoleon created a School of Arts and Trades and fostered two schools of engineering and mining which had been opened earlier. French engineering schools took first rank under Napoleon, and the American West Point and Rensselaer Polytechnic were indebted to them. The same is true of the Paris schools for the deaf and blind which became models for American schools at Hartford (1817) and Boston (1832). For primary education, Napoleon did little more than to re-enact Daunou's law and to enjoin that teachers should not carry their instruction beyond the rudiments. The state did not support them, and after the Concordat of 1801, by which Napoleon made his peace with the Catholic church, the Brothers of the Christian Schools again came in as teachers of the primary schools.

The most spectacular and influential work of Napoleon in the whole field of education was the creation of the University of France, at first called the Imperial University. This is not a school but an administrative system to direct and control all grades of schools. The decree which created it, with a Grand Master at the head and a Council of twenty-six members, was issued in 1808. Its functions were to govern the schools, appoint the teachers, disburse the funds, and set the school examinations. "No school, no establishment of instruction whatsoever," the decree declared, "may be set up outside the Imperial University and without the authorization of its head." With various changes of powers and even of name, this highly centralized system of educational control lasted until 1940 and may be re-established. The nearest American analogy is to be found in the University of the State of New York.

Napoleon considered education to be a primary function of the state. He declared that education is of all political questions perhaps the most important. Unless there is a teaching body with definite principles, unless the child is taught from infancy whether he is to be a republican or a monarchist, a Catholic or a freethinker, the state will not be a nation but will rest upon shifting foundations constantly exposed to disorder and change. He saw clearly the political use that could be made of national education. In creating the University he said: "It was necessary for me to create a civil profession, disinterested, grave, which would work in the interests of science and letters. That is the ideal of my University. . . . Above all I insist that it shall devote itself to letters. I love the mathematical and physical sciences; algebra, chemistry, botany are excellent though partial applications of the human spirit; but letters are the human spirit itself. The study of letters is the general education which prepares for everything; it is the education of the soul." By letters he meant French

and Latin literature. In this ideal of classical education as in his centralizing system of control, Napoleon expressed the spirit of France, and these two ideals have been dominant in French education from that time to the present.

During the period of the Restoration (1815-1830), French industry and agriculture prospered; but little was done for education. The very small annual appropriations were gradually increased and by 1830 somewhat more than half of the thirty-seven thousand *communes* (or townships) had established primary schools. An effort was made to improve the qualifications of the teachers by requiring certification, but the Brothers of the Christian Schools resisted this demand and were excused from the requirement. Thirteen normal schools for primary teachers were established. The monitorial system was introduced from England and, as in the parent country, it aroused great enthusiasm. The infant schools, first developed by J. F. Oberlin in the previous century in eastern France, were now modified to follow the English pattern. In the next reign they were accepted by the government as part of the public system.

3. UNDER THE JULY MONARCHY

The Restoration government fell because the king, Charles X, like a true Bourbon, attempted to alter the Constitution to increase his own power. The middle classes, who had been partially disfranchised by royal ordinance, with the help of the Paris workingmen overthrew the government in July 1830, and Louis Philippe of the House of Orleans became king. The July Monarchy was not a popular but rather a businessman's government. The working classes, who had ensured the success of the July Revolution, went unrepresented. But the country increased in wealth and population. Industry was fostered. The state aided in the building of roads, canals, and railroads; and agriculture was rapidly improved. The "internal improvements" of France paralleled those of the United States in the same period; and in both countries the increasing wealth provided the economic foundation for the extension and improvement of schools. The French Revolution had developed the theory and created the demand for national education and the Industrial Revolution created the means which made it practicable.

The greatest educational achievement of the July Monarchy was the Primary School Law of 1833. The primary and higher primary schools which the law created were intended for the common people; and the old *collèges* and *lycées* continued to furnish secondary instruction for the upper, the wealthy, and the professional classes. There was no attempt to combine the primary and secondary schools into a ladder system which

would have enabled the children of the common people to enter the secondary schools and to prepare for a profession. The July government was conservative and bourgeois and was the friend of popular education to this extent and on these lines only. It did not intend to open the higher professions to common people.

The new government immediately increased the annual appropriation for primary schools; required all teachers to hold a certificate from the state, even those who belonged to religious orders; and opened thirty new normal schools. To find a model for the new primary school system which was proposed, they looked to Germany which had recently reformed its schools. Victor Cousin was sent as a special investigator to gather the results of that country's experience. His Report on . . . Public Instruction in Germany . . . was issued at Paris in 1831 and an English translation appeared in London and New York. This was one of the important educational documents of the century. Cousin favored local school control, but the centralizing tendencies of France were too strong to permit the use of this idea. He did not recommend compulsory attendance because he was sure the French people were not ready for it. He insisted that every commune must have a primary school and proposed the establishment also of higher primary schools. These ideas were adopted.

By the law of 1833, the primary schools were required to teach the French language and this teaching was to include work in reading, writing, spelling, grammar, and composition, the elements of arithmetic, and the metric system of weights and measures. Church schools were to be allowed if the teachers held legal certificates and if the schools submitted to state inspection. Other important concessions were made to the church. Religious bodies were to be represented on the local school committee, but any child was to receive religious instruction only when it was approved by the parents. These provisions show how the religious difficulty was solved and they reveal the extent to which France had receded from the secularizing tendencies of the Revolution. The schools were allowed to charge fees, but these were to be remitted to poor children. The teachers' salaries were guaranteed and the cost of the schools was to be met, according to a formula written into the law, by the communes, the departments, of which there are ninety in France, and the state.

The administration of the schools was apportioned among the same units. There was to be a local committee of the commune with slight powers; and a committee of the *arrondissement* with more general powers. The *arrondissements* are the largest political divisions of a department and are themselves divided into cantons and these into communes. The committee of the *arrondissement* appointed the teachers and reported to the national ministry on the condition of the schools. The power of the cen-

tral government was supreme. Through inspectors, the minister could control the schools, the teachers, and the officers of the arrondissements and communes. By the end of the reign of Louis Philippe about one hundred and fifty inspectors were in service and were exercising delegated powers similar to those of an American superintendent of schools.

The law required the establishment of higher primary schools in the chief cities. These admitted pupils who had completed the work of the lower schools. They taught practical mathematics, including the elements of geometry, drawing, design, some measurements and surveying, some physical and biological science, singing, and the history and geography of France. Where possible, instruction in a modern language and other additional subjects might be offered. But the higher primary schools were primary rather than higher, for they did not prepare their pupils to enter a university. Adult classes were organized, and by 1848 a hundred thousand persons were receiving post-primary instruction. Despite this auspicious beginning, the higher primary schools soon began to decline. Their greatest success was achieved after they were revived by the Third Republic.

The infant schools which had been established under the Restoration were accepted as a part of the public system in 1837. The industrial development of France and the employment of women in factories made them a useful adjunct of the primary system. They were placed under the management of the existing school committees. They admitted children up to the age of six and taught singing, needlework, and manual activities, together with some work in the elementary school subjects.

Within a few months after the passage of the law, the Minister of Public Instruction, Guizot, sent a body of special investigators to report upon the condition of primary education throughout the country. The reports were compiled by P. Lorain and published as *A Survey of Primary Education* (1837). This survey called particular attention to the educational ills of the poorer rural districts and showed that whole communities were illiterate and many communes entirely without schools. Where schools existed, they were often poorly housed and conducted by teachers whose main business might be the selling of liquor or the mending of shoes. Some teachers were paid in provisions which they collected by going from house to house. These were only the worst cases and it would be easy to point to similar conditions in other countries. The purpose of the report was to arouse the French people to the need for immediate improvement. France in 1851 had sixty-one thousand primary schools, but there were even at that time twenty-five hundred communes without schools; the number of normal schools for men had been greatly increased, and a parallel system of normal schools for women had been begun.

The secondary schools, lycées and collèges, remained under government

supervision. They were the classical schools which prepared for entrance to the universities, admitting students at the age of eleven and graduating them as baccalaureates at eighteen. By 1850, France had about fifteen hundred public and private secondary schools with a total enrollment of eighty-five thousand pupils. From these the future civil servants and professional classes were drawn, opportunities which to the parents justified the considerable expense involved. These facts perhaps sufficiently explain the initial failure of the higher primary schools which could offer no such privileges.

4. UNDER NAPOLEON III

The Second Republic lasted from 1848 to 1853, but during the last of these years Louis Napoleon was actually in power and in December of the latter year he was proclaimed Emperor of France and took the name Napoleon III. The revolutionary year of 1848 was followed in France, Germany, and other countries by a strong reaction from liberalism toward autocracy; and the French education law of 1850 was a reactionary statute. Carnot, the Minister of Public Instruction under the provisional government, had appealed to the primary teachers to work for the election of liberal-minded representatives. Looking back to the great Revolution, he declared: "It is not now a matter, as it was in the time of our fathers, of defending the Republic against foreign foes, but rather of defending it against ignorance and deception [from within]; and that task belongs to the teachers." We do not know whether the teachers followed Carnot's suggestion and electioneered for liberal candidates; but the conservatives won. And a noted English observer, Matthew Arnold, remarked that "the conquerors of the Revolution of 1848" did not fail to remember that Carnot and his party had made the schoolmasters their missionaries.

It is perhaps not hard to see why teachers should and why some of them do in fact support a liberal political policy. They usually come from the lower and lower middle classes and have a great deal to gain from a wide distribution of power and from liberal policies. One ought to expect also that teachers would be liberal-minded and liberally educated persons. If this was the attitude and disposition of the French teachers, they were disappointed. Both Carnot's bill and that of Saint-Hilaire, which was substituted for it, had provided for a full complement of infant, primary, higher primary, normal, and trade schools with liberal curricula, free tuition in part, and compulsory attendance to the age of fourteen. But such a program had no chance of adoption in the legislature, with its strong monarchist majority. An education committee of the new government led an attack upon the normal schools and their curriculum. They declared

that the outlook of the primary teachers should be limited to the local school and community; and that they did not desire, as teachers in French primary schools, the budding scholars who had been coming from the normal schools. They limited the courses in history and geography in the normal schools and made them strongly nationalist in tone. They objected to normal students' browsing in libraries. Broadly educated teachers with liberal ideas were not wanted. In France, as in Prussia at this time, political reaction came into power and circumscribed the outlook of the teachers and their pupils. A slighter but similar trend was noticeable in Massachusetts and other American communities.

The Law of 1850 made numerous concessions to the church, in both primary and secondary fields. It also combined the administration of both levels of schools under a Minister of Public Instruction and an advisory Superior Council of twenty-eight members, who represented all the educational interests of the country. It increased the force of inspectors and established the academy as a unit for the administration of secondary and university education. France was divided into sixteen, later with the inclusion of Algiers into seventeen, academies. Since then the chief administrative units for the administration of education have been the whole state, the academies, the departments, and the communes. Only minor functions were given to the *arrondissements* and the *cantons*.

Under Napoleon III the power of the University of France became almost absolute, and the new ruler an autocrat. The press came under complete governmental control. Teachers were allowed to read only *The Monitor*, the official newspaper. An official order required them to shave off their moustaches so as to remove from "their faces, as well as their minds," every trace of the Revolution of 1848. By the Organic Decree of 1852, the emperor through the minister could name and dismiss teachers and practically all educational officials. Teachers were required to take an oath of loyalty, and prominent university professors were dismissed "in the interest of public peace." This centralized system, the University of France, was taken over by the Third Republic but its powers have not been exercised as tyrannically as in the days of the Second Empire. As the Revolution of 1848 receded into the past, educational support became more bountiful and educational administration more liberal even under Napoleon III. France was prosperous, the salaries of the teachers were raised, many new schools were opened, and many primary schools were made tuition free. Under a famous minister, Victor Duruy (1811-1894), the normal schools were improved and given a greater degree of freedom, and education became more professional. Under Duruy, who was a noted historian, much attention was also given to the advancement of higher studies.

5. NATIONAL EDUCATION COMIT'S OF AGE

The defeat of France in the short Franco-Prussian War once again transformed the government into a republic. The Third Republic was proclaimed on September 4, 1870, when the news of the disaster of Sedan reached the capital; but the danger that a monarchy would after all be re-established was great and in fact the National Assembly, which was elected to make the peace, was sharply royalist in composition. The Socialists and Jacobins of Paris feared that one of the Bourbons would again be enthroned. Then came the Commune, an insurrection of the poverty-stricken masses of the capital, which was put down, after a siege of two months, in seven days of ferocious street fighting, the "Bloody Week." In the summer of 1871, the hard treaty with Germany was signed and France was again at peace except that an army of occupation remained and would remain until the heavy indemnity should be paid. The most repugnant part of the treaty required the cession of the two provinces of Alsace and Lorraine to the harsh conqueror, who at once proceeded to Germanize them. German, which was a foreign tongue to many, was made the official language of the courts and the schools. It was this change which gave Alphonse Daudet the setting for a pathetic little story, *La Dernière Classe*, the last French lesson. It is not without meaning to a study of nationalism in education.

The difficulties of the first days of the Republic were staggering. Twenty-six departments were occupied by German troops, the horrors of the Commune were fresh in mind, the public services were disorganized, and party intrigue hampered the new government. The first task was to get the enemy out of the country; and under the leadership of Thiers, the chief executive, this was done so speedily that victor and vanquished were both surprised. The last German soldiers were evacuated in September 1873. The opponents of the Republic hoped to establish a monarchy, but they were divided among themselves and could not agree upon who was to occupy the throne. As Thiers said, "Those who want a monarchy do not want the same monarchy"; and, "There is only one throne but three claimants." The three were a grandson of Charles X, a grandson of Louis Philippe, and the son of Napoleon III. Thiers used his influence in favor of democracy, and by applying the principle of "divide and conquer" he saved the Republic.

The new government adopted the parliamentary system. The President was elected for a fixed term, but the ministry remained in power only while it retained the support of the lower house, the Chamber of Deputies. This was essentially the English system. As a result of this plan, coupled with

the unstable party alignments in French politics, the ministries changed frequently. The average term of the Minister of Public Instruction was less than a year. But because the laws did not change with the ministry and since the details of school administration were carried out by permanent civil servants, these changes did not affect the schools as much as one might suppose. The Republicans came into power in the elections of 1878. They celebrated their victory by repealing much restrictive legislation against the freedom of the press, the right to form labor unions, and the right to hold public meetings.

One of the great leaders in the new order was Jules Ferry (1832-1893), who was a member of several ministries and was twice prime minister. The Republicans were especially eager to nationalize primary education, to consolidate the administrative system, and to reform secondary education. As the state was now based upon manhood suffrage, primary education acquired a new importance and the most significant new legislation dealt with the primary schools. A law of 1881 made these schools free; and another law of the next year made attendance compulsory between the ages of six and thirteen and prohibited the teaching of religion. Increased financial support was provided. A law of 1883 required every town and village to erect and maintain public primary schools and, two years later, the government granted state appropriations to support them more adequately. The main laws of this period are often called the "Ferry Laws" after Jules Ferry, the statesman mentioned, who was Minister of Public Instruction from 1879 to 1880 and again in 1882. The educational activity of this creative period was also extended to the normal schools. Each department was required to establish two such schools, one for men and one for women, for the preparation of primary teachers. Two higher normal schools were created at St. Cloud and Fontenay-aux-Roses for the education of teachers of the departmental normal schools, but these have not been as well patronized as it was hoped. Public lycées and collèges for girls were established. The Higher Council of Public Instruction was reconstituted and provision was made for the inspection of the schools. The system of administration of the French schools will be more fully explained below.

The dominating idea of Jules Ferry was that education, especially in a democracy, is a function of the state. "Let it be understood," he said in an address on July 4, 1876, "that the first duty of a democratic government is to exercise control over public education." His nationalism did not go so far as to prohibit private schools, but these were to be subject to state inspection and regulation and he held that any delegated educational power must be revocable at the will of the state.

Such principles were certainly not accepted by the Catholic church,

which had been officially recognized by the French state ever since the Concordat of 1801 between Napoleon and the pope. According to that agreement, the state paid the salaries of the clergy in return for the privilege of nominating them for appointment to their positions. The new leaders were now becoming more and more dissatisfied with this century-old settlement of the religious difficulty. The Catholic party had from the beginning opposed the Republic and joined forces with the Monarchists. On the other hand, in 1871 the fiery republican orator, Gambetta, had declared "Clericalism, that is our enemy." Three decades later, Waldeck-Rousseau, the prime minister, declared that the church was a rival power, hostile to the state. He claimed that unauthorized orders of monks and nuns had increased until their membership exceeded a quarter of a million and that they held property in excess of a billion francs. But the most serious element in the situation was their teaching, which he said was hostile to the principles of liberty and equality, the very foundations of the Republic. This was a new version of the argument of La Chalotais in his *Essay on National Education*. Waldeck-Rousseau in 1901 secured the passage of a law which made all religious orders illegal unless they were specifically authorized by Parliament. In 1904 the members of even authorized religious orders were excluded from teaching in public schools, and in the following year, the separation of church and state was made absolute and complete. The French state schools, like the French state, became entirely secular.

This does not mean that private schools were outlawed. It must not be forgotten that France is still a Catholic country and that the private, mainly Catholic, primary schools are still formidable competitors with the public schools. This fact is best exhibited by a few figures. In 1886 out of a total of five and a half million French primary school children nearly two million, or about one-third, attended private schools. In 1906 the proportion had dropped down to about one in five and there it has remained. Due to the falling birth rate, the whole number of children in all primary schools dropped from five and a half million in 1886 to less than four million in 1926, a decrease of about thirty per cent. The French call their private schools "free schools," which is to indicate freedom from government control; but they are after all not entirely "free" in this sense. Their teachers, the curriculum, and their textbooks must meet all the state qualifications. They may teach religion, but even the catechisms that are used must be approved by the Minister. As a result, the private schools are largely patterned after the state schools, and set the same examinations.

The following table (from Carlton J. H. Hayes' *France, a Nation of Patriots*) shows the curriculum of the public primary schools.

Table of Studies, Primary Schools, 1938
(hours per week)

	Ages			
	6 and 7	8 and 9	10 and 11	12 and 13
MORALS AND CIVICS	1¼	1¼	1¼	1½
READING FRENCH	10	7	3	2½
WRITING FRENCH	5	2½	1½	¾
LANGUAGE STUDY		5	7½	7½
FRENCH HISTORY AND GEOGRAPHY	2½	2½	3	3
FRENCH SONGS	1¼	1	1	1
PHYSICAL AND MILITARY EXERCISES	1¾	2	2	2
MATHEMATICS	2½	3½	4½	5
SCIENCE	1¼	1½	2½	2½
DESIGN	1	1	1	1
MANUAL TRAINING	1½	1	1	1½
GAMES	2	1¾	1¾	1¾
	30	30	30	30

6. THE UNIVERSITY OF FRANCE

The organization of education in France is of particular interest to citizens of other democracies because it is so highly centralized in comparison with their agencies of control. The present description applies to conditions as they were under the Third Republic. The President of the Republic appointed a Minister of Public Instruction and Fine Arts as a member of his Cabinet. He was a member of Parliament, qualified to address either House, initiate educational legislation, prepare the budget, and issue regulations within the law. Because he was responsible for educational policy and had many legislative and ceremonial duties, he did not concern himself with details and this limited the powers with which he was legally and theoretically invested. The actual work of administration was carried on by a permanent civil service staff organized in four divisions: higher education, secondary education, primary education including higher primary and teacher education, and finance. There were also two sections which dealt with physical education and vocational education. This staff further served to limit the actual exercise of ministerial power. And the Higher Council of Public Instruction formed a third limiting factor. The members of the Council represented the several branches of education and the larger number were elected by their colleagues in the teaching profession. The advice of the Council on such subjects as courses of study, methods, examinations, textbooks, and supervisors was regularly given and almost always followed, though there have been exceptions. There was also a Consultative Committee which dealt especially with appointments and promotions. And

there was, lastly, a staff of twelve national inspectors who supervised the field inspectors and reported on the conditions of education throughout the country. The general effect of this distribution of functions was that the several parts of the central organization served as checks upon each other and that each function was carried out by experts in the field.

The remainder of the system was largely an extension of the same pattern to the subdivisions of the country. For educational administration only, all France including Algiers was divided into seventeen academies. At the head of each was a Rector appointed by the President. He was responsible for the whole educational system of his academy, but in practice he dealt mainly with the university, the secondary schools, and the normal schools. An Academic Council advised the Rector, and a group of inspectors supervised schools and reported upon their work. Actually, the academy inspectors dealt mainly with the secondary schools. Another group of primary school inspectors dealt similarly with that level of education. They made recommendations on appointments, discipline, attendance, buildings, and similar matters.

In each of the ninety departments, the prefect was the head of the primary school system. He was aided by an elected departmental council. With their advice he appointed or transferred teachers, supervised expenditures, and located schools. The departments provided the normal school buildings and contributed to the salaries of the primary inspectors and the cost of education in the commune.

There are in France, as we have said, about thirty-seven thousand communes or townships. Each was administered by a mayor and a council, but except to supervise the school buildings, maintain a school census, and encourage attendance, there was little left for them to do. The communes had no authority over the teacher of the area. The system was nearly as national and centralized as possible. There was no opportunity for direct action or influence or even representation of the people themselves.

This is the nature of the University of France. First established by Napoleon I, re-established and clothed with autocratic powers by his nephew Napoleon III, taken over by the Third Republic and equipped with various "checks and balances," it has been the prevailing system of school administration in France through most of the nineteenth century and down to 1940. The French believe that education should be national and should be administered by experts and not by laymen who would represent either the local community or the people at large. The French are noted for orderly organization and for the clear definition of the functions of officials and institutions, and the University of France reflects French character or at least the character of the French intellectual classes. The American system, on the contrary, reflects our localism, our

individualism, our regard for the wishes of the parents and the pupils, and our feeling that government should not interfere more than is necessary in social and educational matters. Our schools began as local and private institutions and, although centralization has made great progress in the last hundred years, the schools are still close to the local community. Under the laws of the states, the cities, counties, or other districts, each headed by one of our one hundred twenty-seven thousand American school boards, directly elected by the people, still control our schools. There is no greater contrast in the field of educational administration than that between France and the United States. Even in France there has been opposition to the uniformity of the system and a demand has been voiced that local and community interests should be considered. An organization of reformers, called *Les Compagnons de l'Université Nouvelle*, favored greater adaptation of the schools to local and individual needs but, as shown below, without marked success.

7. SECONDARY SCHOOL REFORMS

We should recall that the French system is a dual scheme of primary and higher primary schools, for those pupils who have no intention of attending or at least no opportunity to attend a university, and of secondary schools for those who are to be prepared for university entrance although not all do in fact enter. By the age of eleven the matter has to be decided, for at that age secondary studies proper begin. Two characteristics of French secondary education must also be singled out for special mention. Ever since the Renaissance it has been strongly classical; and it has been devoted to the preparation of a relatively small class of intellectual leaders and to the maintenance of a high level of culture.

Criticism of both of these features began to appear long before the Revolution. In the opening pages of his *Emile*, Rousseau referred to the "ridiculous colleges" of his time and, except for the contemptuous tone of his reference, he merely repeated what Descartes and the Abbé Fleury had said before. La Chalotais attacked not only the Jesuit control of the schools but also the absence of French, modern languages, science, and industry from the program of studies. Five years later Rolland proposed a state system of secondary schools which were to give attention to the history and language of the French nation and people, and to include also modern languages, mathematics, and physical education. The authors of the cahiers of 1789 and Talleyrand, Condorcet, and others favored and attempted to introduce similar changes. An unsuccessful effort to do this was made through the decree of 1852 which established a common course of three years to be followed by two parallel series of studies, the one

classical, the other scientific. Each was to lead to the university. But such a program was only actually achieved in 1902. Within a decade the compromise of 1852 with the modern, practical world was again abandoned because it did not really meet the demands of that world. It merely directed toward the university a group less well prepared than the graduates of the classical course to do what the conservative higher schools required. The reform had gone too far for the classicists and not far enough to prepare for business, industry, or agriculture.

The demand for reform did not grow less, meanwhile, but instead was fast becoming irresistible. "Authority does all that can be done in favor of the old classical training," said Matthew Arnold after a study of secondary education on the continent. "Ministers of state sing its praises. Still in the body of society there spreads a growing disbelief in Greek and Latin, at any rate as at present taught, a growing disposition to make the modern languages and the natural sciences take their place." This was a correct analysis of public opinion. The demand for reform came from the lower and middle classes, not from the secondary teachers or the "ministers of state." But at this point the demand for reform struck a second snag. For centuries the French secondary schools had been not only classical but also highly selective and devoted to the preparation of an intellectual elite. The people themselves were now asking to be allowed to share directly in the benefits of this education.

Under the Third Republic six successive reforms of the curriculum were undertaken. Since all of these turned upon the question of the classics versus the modern subjects, it will be possible to deal with them somewhat generally without going into the details of each one. Jules Simon, Minister of Public Instruction under Thiers, increased the time given to modern language and reduced the amount of grammar and composition in the classical studies in favor of a broader reading program "Modern languages," he held, "are to be spoken and dead languages to be read." This lasted about three years. Jules Ferry, in the important reform of 1880, made a radically different attack. He postponed the beginning of Latin by several years in order to make it possible for pupils from primary schools to enter the secondary schools later; and he also increased the attention given to the sciences. The time of the special classes in modern subjects which were taught in some of the lycées and collèges was increased from three to four and even to five years; but these classes were not part of secondary education proper. These efforts were, however, made to increase the opportunities of the common people.

The Ribot Commission of 1898 was appointed to study the whole question of secondary education. It concluded that the classical tradition should be maintained and even strengthened. But to do this it was declared

essential that only suitable pupils, those with linguistic ability, should be enrolled in the classical courses and that a parallel modern course with equal rights and privileges should be set up. This was done in the reform of 1902. The new scheme provided for four sections of seven years, from the age of eleven to that of eighteen, in all full secondary schools. These may be designated as Latin-Greek, Latin-modern languages, Latin-scientific, and modern languages-scientific. Each of these, when successfully completed, led to the university. In all sections great attention was given to the study of the mother tongue. Modern foreign languages were to be taught by direct methods and in Latin the emphasis was to be placed upon reading and literature rather than grammar. Thus in 1902 the modern subjects won their long struggle for equal treatment and recognition in comparison with the classics. They did not succeed in winning equal prestige among the French people.

There was after all some question about the conclusiveness of the victory. It will be noticed that three of the four parallel courses included Latin and two included or might include Greek also. Only one had no classical requirement but this one did give all the rights and privileges of university admission. Except for the abortive attempt of Minister Bérard in 1923 to bring back compulsory Latin and Greek, the reform of 1902 stood until 1925. It was not satisfactory to all classes or perhaps to any in all respects. One of the most valid criticisms of the scheme was that it required a too early and too complete specialization, that the classical student did not get enough scientific and the scientific student did not get enough literary education. The reform of 1925 attempted to remedy this. The studies required of all secondary students by this act may be best exhibited in the following table, which is taken from Carleton J. H. Hayes' *France, a Nation of Patriots*.

Table of Studies Common to All Pupils in Boys Secondary Schools (1931)
(hours per week)

	Year					
	VI	V	IV	III	II	I
FRENCH	4	4	3	4	3	3½
HISTORY	1½	1½		2	2	
GEOGRAPHY	1	1	3½	1	1	3½
MODERN LANGUAGE	3	3	3	3	1½	1½
MATHEMATICS	2	2	3	3	4	3½
NATURAL SCIENCE	1½	1½	1	1		
PHYSICS AND CHEMISTRY					3	4
DRAWING	2	2	1½	1		
ART				½		
	15	15	15	15½	14½	16

But the table shows only a part of the requirements. The boys took six or seven additional hours per week in language and literature. For this work they were divided into three groups, according as they elected to study Latin and Greek, Latin and a modern foreign language, or two modern languages. For the seventh and final year all the boys were divided into two sections, a philosophy section and a mathematics section. In the former they studied principally philosophy, history, and literary subjects, and in the other, principally mathematics and the sciences. The total program involved twenty-one hours of class work in each week in the early years and twenty three to twenty-five in the later years of the course. There were also private secondary schools, but their curricula and work were very similar to those of the public ones. Boys, whether from private or public schools, had to pass the same state examinations for "graduation" and again later when, as men, they wished to be allowed to practice their profession.

Until within our own generation, secondary education in France remained a privilege of the ruling and the upper middle classes. And, since secondary education provided the only avenue to the university, the same statement applies to higher education. France carried on two separate school systems within one centralized administration, a primary system for the millions and a secondary-higher system for the elite, though there were scholarships for the brilliant among the poor.

In World War I, the *Compagnons de l'Université Nouvelle* was formed to secure for all classes of children the privileges which had been restricted to a few. They succeeded in 1925 in establishing the *école unique* or common school on the elementary level although only in a few towns. Preparatory classes for secondary schools continued to exist, but fees were gradually abolished and children were admitted from the *école unique*. In 1933 the number of scholarships in the secondary schools was increased and fees were abolished. But with few and unimportant exceptions the curricula remained as they had been. The reform had not gone far enough. It had opened the secondary-higher education to many poor and brilliant children but it had not diversified the offerings. Secondary and higher education still led only to the professions and the professions were already overcrowded.

When Jean Zay became Minister of Education in the middle thirties an attempt was made to correct this condition. He proposed to develop technical and industrial schools on secondary and higher levels to enable large numbers of young people, excluded from the professional and purely intellectual fields, to serve France in practical vocations and to provide means for personal advancement. He realized that a democracy must provide opportunity for all kinds of abilities. Guidance classes were es-

tablished in the secondary schools and handicrafts and extracurricular activities were introduced, but the war in 1939 stopped all these efforts to make French education more fully democratic.

8. FRENCH NATIONALISM AND EDUCATION

Devotion to the nation and the state is always, in any country, a product of the contemporary culture. It is not inherited. It can be transmitted only as the knowledge of arithmetic is transmitted, by teaching each generation and individual; but, unlike arithmetic, it is not a matter of knowledge and skill only but of a knowledge that is highly charged with emotion. Love of country is a fit and frequent theme of story, poem, and drama, and it is taught not only in set lessons but also through popular works of literature and history, through songs, ballads, slogans, national holidays and ceremonials, by service in the army and the offices of the government, and through the activities of patriotic societies and deliberate propaganda of many kinds. Many of these means are employed in schools. Competent students have reported their conclusion that the French people were more nationalistic than most of their neighbors but this is a view that in the nature of the case cannot be demonstrated. Certainly this love of France was not able to produce unity in politics and national policy. It will, nevertheless, be useful to see how the schools contributed to French nationalism.

The national system of primary schools brought about one result, at least. The schools taught nearly everyone to read and write the national language. Illiteracy is a word of various meanings but, if it means some ability to read and write, then illiteracy in France was reduced from forty per cent in 1850 to about three per cent in 1940. The schools did their utmost to bring about this result. No nation has given more, or more careful, attention to the teaching of its national language. Since about 1880 French primary school children have received about thirty hours of instruction per week, and two-fifths of this time has been given to language instruction, to the reading, writing, and study of French. But there were also pockets of non-French nationalists who resisted these efforts of the schools. There were the Germans of Alsace, which had been returned to France after World War I, the Basques north of the Pyrenees, and the Bretons of the northwest. The autonomist movement in Brittany was at first purely cultural in character. A group of loyal Bretons agitated for the preservation of their ancient language and for its cultivation in the schools. Before the outbreak of the war in 1939, each of these three regions became centers of anti-French propaganda.

Not only the language instruction but also the history, geography,

civics, and the French songs were made vehicles of nationalist influence. Nearly all the history taught in the primary schools was French history and almost all the heroes who were held up for admiration by the children in the lower grades were French heroes. Columbus, Franklin, and Livingstone were included and may seem to be exceptions and the only exceptions; and of these, Franklin as United States Ambassador was the friend and idol of France and Livingstone was the explorer of the African continent where France's most extensive colonial possessions lie. This leaves Columbus who discovered America, which was once the seat of a great French empire and is still the home of many who speak French. The history textbooks, including those used in Catholic schools, were all approved by the Ministry of Public Instruction and were so far official. Not all of them were equally nationalist but in the main they taught that the glory of France had been dearly bought and that all her children should early learn to love her and to sacrifice for her so that she might continue to hold her position in the world as the leader and champion of civilization. Except for the claim in this last clause this seems to be a reasonable patriotism.

Patriotism was also one of the main topics in the books on morals and citizenship, and many of the school songs were patriotic and nationalist in character. As early as 1883 the Minister of Public Instruction issued a circular on the then new branch of civics. He urged the teachers to teach it in a simple and concrete way through examples and illustrations. The children were to be taught good habits, respectful manners, and such virtues as obedience and loyalty in the home and school. The personal virtues of cleanliness, honesty, temperance, were extolled and the dangers of alcoholism were explained. The religious teachings were to be such only as would not offend the leading faiths, the Catholic, the Protestant, and the Jewish, that is, they were to be general and non-doctrinal. There were also lessons on the greatness of France and her claims upon the youth. A wide variety of books written on these lines was prepared. They generally stressed French nationality, the republican government, and the duties of the citizen to the nation. The necessity for a large army was explained and the children were taught that it would be their duty to pay taxes for its support and for the security which it would provide.

Both the history and civics books in later times went much farther. The wrongs of France in the war and peace of 1870 and 1871 came to be emphasized and a hatred against Germany was sometimes instilled. This tendency was greatly increased by World War I. Many of the newer books taught that Germany had deliberately caused the war and had waged it in a barbarous manner. The largest of the teachers' associations of France defended this account of the war. In a statement on the question of chauvinistic teaching which they made in 1927, the teachers declared that

Germany, without question, had wanted, prepared for, and begun the war and had indulged in barbarities and atrocities as long as she thought that she could win. Not all French teachers agreed with this verdict and the government itself on several occasions undertook to discourage chauvinism in the schools. But patriotic societies and some of the influential newspapers, including *Le Temps*, denounced all attempts to moderate the language of the textbooks as "school pacifism." The table on page 306 shows that from one-half to two-thirds of the work of the primary schools was admirably adapted to promote nationalism. And, while this cannot be in equal degree asserted of the secondary curricula, the product of these schools, the secondary school *bacheliers*, were even more nationalist than the average French citizen.

The effect of the teaching should be examined from a broader standpoint. Nationalism was not enough. While the school system helped to unite the people in their admiration for their language, history, and culture, it did not sufficiently unite them in other respects. The conditions in France preceding the disaster of 1940 would embarrass anyone who should assert the infragable unity of the nation. There were numerous groups and parties, communist, fascist, industrial, proletarian, Catholic, royalist, socialist, and republican, which in the latter years of the Third Republic fought with each other for control. Most of them were ready to shout for the *gloire de la belle France* but each of them wanted a different France. After 1936, the Republic was further undermined by a vicious German propaganda supported by Berlin and directed from Paris itself. Nationalist the French people were; but they were not united in support of their government.

The French school system will always be a profitable subject of study and especially so for those who live under so different a plan and organization as do the Americans and the English. From the foregoing it is evident that France did not have any profound influence upon American education. Particular institutions, such as Jefferson's university plan, several military and engineering schools, schools for the blind, deaf, and mentally defective, and certain devices such as the Binet tests have been borrowed or modeled upon French antecedents. But in school administration, in contrast with the French policy of central control, we began at the other extreme, with the local community, and we have not yet attained any very high degree of centralization. From the next country to be studied, Germany, we have borrowed a great deal more.

Before the rise of nationalism, schools were usually conducted either by private or by church agencies. The imperial and municipal schools of the Roman empire form only apparent exceptions, for they were not controlled by the state or specifically intended to promote its interests. In the later Middle Ages

and after the Reformation, newly founded municipal schools became numerous and state activity became pronounced, but only in the last two centuries have the great national states created public schools for the education of all. Since the French Revolution had the most far-reaching effects in spreading an aggressive nationalism, we have considered the French national school system first of all.

To reduce the theoretical educational proposals of the French Revolution to practical form and to incorporate them in the political system of France required almost a century. Napoleon outlined the administrative system, the University of France, the government of Louis Philippe laid the foundations of primary education; and in the Third Republic, primary, secondary, and higher education became secular and nationalistic, well supported and efficient, and centralized in administration. Both primary and secondary education became free and the former became practically universal. The French schools have become especially effective in teaching the national language; and also in instilling nationalistic sentiment. The French child learns to write well and to believe in French culture and its civilizing value to Europe and the world. France is a Latin country and its secondary schools tend to emphasize classical education. An elaborate system of public professional schools for teachers has been developed. With all these public provisions, one-fifth of the primary school children still attend private, usually Roman Catholic, schools; but these are also required to meet state standards.

Although the schools and other institutions of France succeeded in developing a strongly nationalist sentiment, this was not able to prevent internal disunity or to repel foreign propaganda in the years before 1940. This is the most recent lesson taught by the history of French education.

QUESTIONS

1. Why has nationalism become strong and aggressive in recent times, when it was almost unknown in earlier days? Consider changes in economic conditions, in modes of communication, in science, invention, and the conduct of war, and the complementary effects of nationalism and education upon each other.
2. Why is French educational control highly centralized?
3. Why was it logical for the July Monarchy to develop primary and higher primary schools?
4. Compare the meaning of the phrase "secondary education" as this term is used in France and in the United States.
5. Why were the French primary school teachers more likely to be politically liberal than secondary school teachers?
6. Compare the plan of Condorcet with the system developed by the Third Republic.
7. Why would a unitary (ladder) system be more appropriate for a republic than the parallel system which France retained after 1870?
8. What objections do you see to an administrative organization such as the University of France? What advantages may it have?
9. Does French education seem more nationalistic than American education? If you think it is, how may this be explained?

FOR FURTHER READING AND STUDY

The present chapter and the following list deal in the main with education in France since the eighteenth century but a few works on the history of nationalism are included. In the brief introduction to his *French Liberalism and Education*, La Fontamerie contributes important information on conditions before the Revolution; and if to the four documents which he has translated we add the *Émile* we shall have the materials for a fair understanding of educational thought in the Ancien Régime and the Revolution. The Yearbooks of the International Institute are essential for the period between the two World Wars.

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- Barnard, Howard C., *The French Tradition in Education*. Ramus to Minc. Necker de Saussure, Cambridge, University Press, 1922, 319 pp.
- Brown, Rollo Walter, *How the French Boy Learns to Write; a Study in the Teaching of the Mother Tongue*, Cambridge, Harvard University Press, 1915, 260 pp.
- Buisson, Ferdinand, *Dictionnaire de Pédagogie et d'Instruction Primaire*, Paris, Hachette et Cie., 1880-1887, 4 vols.; *French Educational Ideals of Today; an Anthology*, Yonkers-on-Hudson, N. Y., World Book Company, 1919, 326 pp.
- Compayre, Gabriel, *The History of Pedagogy*. Translated and edited by W. H. Payne, Boston, D. C. Heath and Company, 1891, 598 pp.; *Histoire Critique des Doctrines de l'éducation en France*, Paris, Hachette et Cie., 1911, 2 vols.
- Dickinson, G. Lowes, *Revolution and Reaction in Modern France*, London, George Allen, 1892, 300 pp.
- Farrington, Frederic E., *The Public Primary System of France*, New York, Teachers College, Columbia University, 1906, 303 pp.; *French Secondary Schools; an Account of the Origin, Development, and Present Organization of Secondary Education in France*, New York, Longmans, Green and Company, 1910, 450 pp.
- Gay, P., and O. Montreux, *French Elementary Schools: Official Courses of Study*. With an introduction by I. L. Kandel, New York, Teachers College, Columbia University, 1926, 270 pp.
- Hassall, Arthur, *Louis XIV and the Zenith of the French Monarchy*, New York, G. P. Putnam's Sons, 1925, 444 pp.
- Hayes, Carleton J. H., *Essays on Nationalism*, New York, The Macmillan Company, 1926, 279 pp.; *France, a Nation of Patriots*, New York, Columbia University Press, 1930, 487 pp.; *The Historical Evolution of Modern Nationalism*, New York, Richard R. Smith, 1931, 327 pp. The second work above is an important study of nationalist education as conducted by schools and other agencies.
- Huddleston, Sisley, *France*, New York, Charles Scribner's Sons, 1927, 613 pp.
- Hyslop, Beatrice Fry, *French Nationalism in 1789, According to General Cahiers*, New York, Columbia University Press, 1934, 343 pp.

- Kandel, Isaac L., *The Reform of Secondary Education in France*, New York, Teachers College, Columbia University, 1924, 159 pp.; *Comparative Education*, Boston, Houghton Mifflin Company, 1932, 922 pp., *History of Secondary Education*, Boston, Houghton Mifflin Company, 1930, 577 pp.; Editor, *Educational Yearbook of the International Institute of Teachers College, Columbia University*, New York, Teachers College, Columbia University, 1934, 564 pp. Under the title "The Educational System of France," this contains (pp 1-290) a translation of the *Atlas de l'Enseignement en France*, prepared by the Commission française pour l'Enquête Carnegie sur les Examens et Concours en France. It has an extensive bibliography. The Yearbook has been published annually since 1924 and each volume to and including that for 1932 contains material on French education. See especially the volumes for 1929 and 1930.
- La Fontainerie, François de, *French Liberalism and Education in the Eighteenth Century; the Writings of La Chalotais, Turgot, Diderot, and Condorcet on National Education*, New York, McGraw-Hill Book Company, Inc., 1932, 385 pp.
- Reisner, Edward H., *Education and Nationalism since 1789*, New York, The Macmillan Company, 1922, 575 pp.
- Walsh, Henry H., *The Concordat of 1801: a Study in the Problem of Nationalism in the Relations of Church and State*, New York, Columbia University Press, 1933, 259 pp.

14 NATIONAL TRENDS IN GERMAN EDUCATION

THE HISTORY OF GERMANY PROVIDES THE MATERIAL FOR A second study of the national trends which characterize education today. That country was a loose confederation of states until Bismarck welded them into an empire but even then the states retained their autonomy in education. Complete unification and subordination resulted when the National Socialist party came into power in 1933.

After the Reformation, each state gradually developed its own school system; but the church, the Lutheran state church in the north and the Catholic church in Bavaria and the south, remained strongly entrenched in educational matters. Cooperation between state and church marked the earlier systems but the actual management of the schools long remained in the hands of the clergy, who did not favor strong civil control of education and who were in intimate contact with the people.

1. IN THE EIGHTEENTH CENTURY

Although the Reformation inspired the organization of elementary schools, it was the eighteenth century, and partly the influence of Frederick the Great, which laid the foundations of the Prussian and other state systems that were later held up for our admiration. Compulsory attendance had been proposed by Luther and was enacted into law in Weimar in 1619 and a century later Frederick William I of Prussia issued an order requiring attendance at school. His son, Frederick the Great, in 1763 prescribed a detailed Regulation for rural schools. This decree marked an educational milestone. Compulsory attendance from the age of five to fourteen was ordered and arrangements were made to relieve the poor from excessive financial burdens. The school year, the hours of the school day, and the curriculum were fixed. Supervision was prescribed but was left in the hands of the clergy. There were other difficulties. Funds and means of enforcement were lacking. Similar but somewhat broader regulations covering the

urban schools also were made for Catholic Silesia. And a parallel code for normal, secondary, and elementary schools in Austria was prepared by J. E. Felbiger (1724-1788), who had been appointed minister of education by Maria Theresa. The "normal schools" were model practice schools in which teachers were to be prepared.

Prussia took further measures in the eighteenth century. A national board of education or *Oberschulkollegium* was instituted in 1787. The Prussian code of 1794 included the principle of state control of education, declared schools to be state institutions, and established local school committees. Supervision was still left to the clergy and even the members of the *Oberschulkollegium* were taken from the same profession. No religious discrimination was to be permitted. But these advanced measures were mere paper reforms. Frederick the Great had revealed his real intention when he said that "in country places a little reading and writing will be enough, for if the peasants learn too much they will want to move into town and become clerks." The schools were not much improved and this explains why neighboring countries paid so little attention to Prussian education until the next century. When progress began in earnest, not only in the law books but in the actual schools, Victor Cousin of France, Henry Brougham of England, and Alexander Bache, C. E. Stowe, and Horace Mann of the United States made the world acquainted with the new developments.

The eighteenth century was the period of the "benevolent despots," Frederick the Great, Catherine II of Russia, and Maria Theresa and Joseph II of Austria. They all understood the educational strategy of autocracy which is based upon the cynical observation that highly educated officials do not easily become revolutionaries but that to educate the poor spells danger. Frederick the Great, like Napoleon after him, was most interested in the education of leaders. He reformed the old knightly academics, a task which he committed to J. G. Sulzer, and, also, the classical gymnasiums. Upon the advice of Frederick Gedike (1755-1803), the gymnasial leaving certificate was introduced. This certificate, which was granted after a comprehensive examination and which admitted its holders directly to the university, raised the level of instruction and guaranteed its quality. The measure had far-reaching effects upon both the gymnasium and the university.

If the government had provided financial support, the lower schools also might have been improved. Under existing conditions, reform in elementary education often depended upon the initiative of humanitarian landlords. Such a landlord was Eberhard von Rochow (1734-1805). In the preface to his *School-Book for Country Children* he said: "I live among country people and I pity them for the wretchedness of their condition

and their ignorance and prejudices. They neither know how to make good use of what they possess nor how to give up cheerfully what they lack. They are not at peace with either God or king." This condition he ascribed to defective education. On his estate he demanded and attempted to supply educated teachers, good buildings, and adequate salaries, and set up a curriculum that included arithmetic, nature study, letter writing, and enlightened religious teaching. He was personally acquainted with Basedow and accepted his aims of happiness, utility, and reasonableness and his principle that schools should be public institutions. His reforms and ideas did not spread and the effort to introduce them in Brunswick in 1786, with J. H. Campe as superintendent, was wrecked by the opposition of the clergy and nobles. The ideas of Basedow and the Enlightenment were adopted in private schools and affected national education when it actively developed in the Napoleonic era. The real beginnings of modern public education must be placed in the nineteenth rather than the eighteenth century, and only a generation before similar measures were taken in France and the United States.

2. BIRTH OF THE FATHERLAND

Napoleon routed the German armies in the battles of Jena and Auerstedt in October 1806, while Hegel, with the thunder of the guns in his ears, continued to write his philosophy. The incident may be taken to mark the lack of nationalist feeling of the greatest Germans then living, Hegel, Goethe, Beethoven, and others. Nine months after the defeat, France imposed the severe peace of Tilsit upon the humiliated Germans. Prussia lost vast territories, assumed a heavy indemnity purposely left indefinite, and agreed to support the armies of occupation and to limit her own army to forty-two thousand men. When Napoleon later needed soldiers for the Spanish campaign he was compelled, fortunately for Prussia, to withdraw many regiments from the occupied areas.

The defeat and the drastic peace treaty aroused the patriotism of the Germans. Fichte, who in his lectures of 1805 had declared himself a citizen of the world, now became a nationalist. His *Addresses to the German Nation*, delivered while French soldiers patrolled the streets of Berlin, were a call to regeneration and as one means he recommended a Pestalozzian education. It might be easy to overemphasize the influence of Fichte but not of these ideas which many held in common with him. Within eight years after Tilsit, the allies were in Paris and Napoleon was on his way to St. Helena.

The German Fatherland was a creation of the youth under the lead of von Stein, Hardenberg, Scharnhorst, and Gneisenau. The collapse had re-

vealed the fault of the state to von Stein: it was built from the top downwards. He saw new forces arising from below, from the common people, and he turned to them. If the state could develop and enlist their talents, it would become invincible. This was von Stein's program for the regeneration of the nation: "To bind everyone to the State by conviction, sympathy, and cooperation in the affairs of the nation, to give the forces of the nation free play and direct them towards the common good." And if this sounds like the voice of revolutionary France, the answer is that von Stein was not deaf. Nor were the principles of the French Revolution altogether French or new. Government by the people was a principle of Calvinism that had been asserted in the English Commonwealth, the English Revolution of 1688, and the American Revolution of 1776.

The first law of von Stein freed the serfs and he attempted to provide land for the peasants. Civil rights were promoted and internal improvements were begun. When the French secured von Stein's dismissal, Hardenberg carried on. He abolished guild monopolies and developed commercial freedom and he annulled the restrictions on the Jews. Scharnhorst created a citizen army by evading Napoleon's limits upon its numbers. Greater than any specific measures was the moral renewal of the nation.

The political and social reforms implied educational reforms and of this the leaders were well aware. Education, said von Stein, must develop love of country, of fellow-men, and God, and must avoid all merely decorative, borrowed, artificial culture. Such an education, the Pestalozzian, was waiting to be adopted and it was in this period that Pestalozzi's ideas became fruitful in Germany. Ernst Moritz Arndt (1769-1846), the patriotic writer, was to some extent a disciple of Rousseau and Pestalozzi. Friedrich Ludwig Jahn (1778-1852) was the founder of a propagandist German physical education. He was at this time a teacher in Plamann's Pestalozzian school in Berlin, as was Froebel. Eighty-four gymnasiums of the Jahn type were established in Prussia and most of the young men who attended them enlisted in the War of Liberation.

The reorganization of the central educational administration and the founding of the University of Berlin testify to Prussian concern for education. The old *Oberschulkollegium*, a sleepy and reactionary body, was abolished and a new bureau was set up in 1808 as a division of the Ministry of the Interior. William von Humboldt (1767-1835) was the first chief of the division. He was a scholar whose appointment to a government post was about as remarkable as that of Henry Barnard to a similar position at Washington in 1867. With others, Humboldt organized the University of Berlin. He secured for Prussian students the right to study

at non-Prussian universities, introduced a state examination for all prospective secondary school teachers, and reformed the gymnasium on a more thoroughly humanistic plan.

3. FOUNDERS OF SCHOOLS FOR THE COMMON PEOPLE

The greatest changes in education occurred in the elementary schools. Prussia in the north and Bavaria in the south were the leaders, but all states became active. Two of the officials in the Prussian bureau of education were G. H. L. Nicolovius (1767-1839) and J. W. Süvern (1775-1829). Nicolovius met the young Pestalozzi while he was still at Neuhof and wrote: "I have made the acquaintance of a man who is really a man, Henry Pestalozzi, the author of *Leonard and Gertrude*." The great Swiss was equally drawn to the young visitor. Upon returning home, Nicolovius was advised by the philosopher, Kant, to devote himself to education and to aid in adapting the schools to the new needs of the nation and people. Nicolovius and Süvern were able to persuade the government to send young men to study with Pestalozzi, expenses paid, in order that they might acquire a similar zeal for the education of the common people. These young men, when they returned, became the nucleus of a corps of Pestalozzian teachers. Pupils of Pestalozzi were put in charge of seminaries for teachers. One of these was Karl A. Zeller (1774-1840) who, as principal of the teachers' seminary in Königsberg, educated hundreds of young elementary teachers. Another great leader was William Harnisch (1787-1864) who had come into intimate contact with Jahn in Plamann's Institute in Berlin. He published his first work, *Schools for the People, on Pestalozzian Principles*, in 1812. "I have been inspired," he wrote, "by the ideal of a popular education for the development of a community which shall include the whole nation and all the people." Because no one else has written on this subject, therefore, he declared, "I write upon it." Jahn found him a kindred spirit and Walt Whitman, if he could have known him, would have acclaimed him.

His book made Harnisch, at twenty-five, head of the teachers' seminary at Breslau, but officialdom and the aristocracy did not share his views. When the reaction caught up with him, the Turnplatz which he had opened was closed, his nature study excursions were suspended, and he was moved to another seminary at Weissenfels which he also made into a model institution. It was this second seminary which he directed that was visited and praised by Bache and by Stowe from the United States. During the next period of reaction in 1840, he was permanently retired. His influence was continued by his writings and by the teachers' association he had founded at Breslau.

The extension of the Prussian-Pestalozzian system was largely due to the one who gave it this name, F. A. W. Diesterweg (1790-1866). Diesterweg was a teacher and successively director of two teachers' seminaries, but it was as a liberal educational publicist and a champion of the common schools and their teachers that he was most significant. He campaigned for improved teacher education and for better salaries, and he organized educational associations, directed conferences, delivered speeches, and conducted institutes. He fought for professional and against clerical administration, and opposed the teaching of sectarian religion in the schools. On these latter points he had against him the full weight of the church, the government, and the Holy Alliance. In his later years he made the acquaintance of Froebel and became a promoter of the kindergarten. His services to Froebel were of doubtful value because he was suspected of socialism and the Prussian bureaucracy retired him. Even then he was not completely silenced for he continued to write and speak for the cause of broader and freer education.

The success of the new schools was retarded by the opposition of the officials, the clergy, and the landlords who had the legal privilege of selecting the teachers of schools on their estates. We have incidentally referred to several waves of reaction. The first came in 1819, the year when Stüvern proposed an education law that outlined a ladder system which would have opened the way for even peasants' sons to pass through the elementary schools to the gymnasium and into the university. This was the plan of Comenius come to life and shows the height to which educational liberalism rose after the defeat by Napoleon. Such a scheme might have received serious consideration a decade earlier when the government was in desperate straits, but it had no chance after the danger passed and the princes breathed freely again.

4. REVOLUTION AND REACTION

We have seen how liberals such as Harnisch and Diesterweg were moved from one position to another and finally retired from active service during periods of conservatism. We must look a little further into the revolutions of 1813, 1830, and 1848. During the hundred days before Waterloo, the thoroughly frightened Prussian king promised his people a constitution and popular assembly. This pledge was forfeited after Napoleon was interned. A national association of students, the *Burschenschaft*, was founded at Jena in 1815 and chose for its motto, "honor, liberty, and fatherland." Two years later, meeting at the Wartburg to celebrate the third centennial of the Reformation and to claim its liberties for themselves, they burned the writings of a reactionary university professor. But when in 1819 a student

killed Kotzebue, the dramatist and journalist, the government seized the opportunity to suppress all student associations and all liberal movements. Teachers charged with liberalism or socialism were thrown into prison. One of the victims was Father Jahn. He was arrested in his child's sick-room and, although the accusations against him could not be proved, he was carried from prison to prison, and shut off from communication with his friends until even his tenacious spirit was broken. The reactionaries were in complete control.

The Greek revolt against Turkey (1821) aroused anew the "liberal conflagration" which had been damped down by the Holy Alliance. Free peoples everywhere sent sympathy and aid. In 1830 the revolution broke out in France and the Bourbons were for the last time driven from the throne. When the storm passed through Germany, many of the princes were compelled to grant constitutions to their people but a few years later some of these were again revoked. When this occurred in Hannover, seven Göttingen professors, including the historians Gervinus and Dahlmann, and the Brothers Grimm, protested against the arbitrary act. All seven were removed by the Duke of Hannover and some were banished. A Prussian cabinet minister declared: "It is not becoming for subjects to judge the actions of the Head of the State by the measure of their limited understanding." This cause célèbre should not be forgotten when we hear of the boasted *Lehrfreiheit* of the German universities.

Some of the objectives of the liberals in the revolution of 1848 were free speech and a free press, the right of assembly and petition, and popular representation in government. Although the army soon had complete control of the situation, the king was irresolute because he swayed between a romantic desire to be regarded as the father of his people and a firm faith in the divine right of kings. His promises were worth no more than those of his father had been. The common school teachers were in general of peasant or working-class stock and were on the side of freedom; but the common schools had not prepared the people for participation in politics. As a result, there was no cohesion among the liberals and they were unable to work out a plan which the majority would support. Frederick Engels called it "playing at revolution." Much of the social legislation which was proposed in the Frankfort Parliament (1848) was, however, enacted later.

The authorities demanded changes in the work of the elementary schools as early as 1840. In December of that year a beginning was made in the effort to curb liberalism by placing restrictions upon teachers' seminaries. Teachers were not to instil in the children hopes that could not be realized. The schools should emphasize religion, a modest vocation industriously pursued, simplicity, and loyalty. Future teachers were to read only "safe"

books. Horace Mann visited Germany in 1843, and the student can read in his *Seventh Report* not only his praise of the schools but also his criticism of the government of that period.

During the revolutionary movement of 1848, the teachers took fresh courage. They attempted to return to the earlier program of Sövern which proposed to frame the lower schools, town schools, gymnasia, and universities into an educational ladder; and they urged the establishment of continuation and infant schools. Nothing came of it at the time. The king appeared before a meeting of the teachers' seminary leaders to threaten and scold. All the misery of Prussia, he said, was due to the false and godless education of these schools. "As long as I hold the sword-hilt in my hand," he boasted, "I shall know how to deal with such a nuisance." The king won; but one suspects that it was after all a somewhat nervous hand that grasped the royal weapon. A new minister, a bureaucrat who knew how to govern by edict and decree, Karl von Raumer, was placed over the schools. He prohibited the circulation of the writings of Diesterweg and Froebel and proscribed the kindergarten in Prussia. In the October Regulations of 1854, he prescribed the curriculum of the teachers' seminaries. Broad cultural education was to be avoided. Educational theory was a powder keg for which school management had to be substituted. The elementary curriculum was to be similarly limited and was to aim at the development of loyal, submissive subjects who were not to have or to expect political influence. Thus it becomes evident that in Prussia each liberal movement was curbed by an autocratic reaction which laid its heavy, repressive hand upon the schools and teachers.

5. THE UNIFICATION OF GERMANY

The unification of the German states, with the exception of Austria, was accomplished through the Franco-Prussian War in 1871, and the king of Prussia became the head of the new German empire. Neither in the violent methods used nor in its outcome was it such a unification as the liberals had proposed. They had worked for a union under a democratic constitution; but the constitution of the empire gave Prussia the controlling voice in foreign affairs, and even in domestic questions the representatives of the people had little power.

The empire was a union of the governments of twenty-six states. Its chief administrator was a chancellor who was responsible only to the emperor and not to parliament. The imperial parliament was composed of two bodies with very unequal powers. The upper house or *Bundesrath* represented the states of the federation and had extensive powers over foreign affairs, the army and navy and the issue of peace and war, and

over commerce and communications. The members were appointed by the governments and Prussia sent nearly one-third of the whole number, far more than any other state. Action on important questions including all constitutional changes could be blocked by fourteen votes and Prussia had seventeen. Theoretically the *Reichstag*, the lower house, which was elected by the people, had a veto in legislation, but the efficiency of this was greatly limited by the condition that the Cabinet, that is, the active government, was not responsible to the people's representatives. It was proposed during the process of unification to make the Ministry responsible to the *Reichstag*. This would have given the people powers similar to those exerted in Britain through the House of Commons; but the princes, governments, and Bismarck would not consent. Since the empire was a federation, many matters of local concern and internal administration were, as in the United States, left to the state governments. Education was one of these political functions which were left to the direction of the separate states.

In her economic and industrial development, Germany in 1870 was almost a century behind England. It was in 1874 when Queen Victoria took the title of Empress of India and when England reached out for the Suez Canal; but in Germany at that time only the first signs of colonial ambition and the earlier stages of the industrial revolution were to be observed. Bismarck declared Germany to be "a satiated state," for he needed peace to consolidate the recent gains. Industry developed with unexampled rapidity after 1871. The output of coal, a good index, quadrupled between 1860 and 1880 and increased to six times the 1860 output by 1890; and this rate of expansion was maintained for two decades longer. Within the single year of 1872, nine thousand miles of railroad were under construction in Prussia alone and, instead of importing it, the rolling stock was now manufactured within the country. A part of this huge expansion was financed from the indemnity which France was forced to pay after the war. The chemical and electrical industries showed similar vigor. The good times were interrupted by a severe business depression, partly caused by the flow of French gold into Germany. Bismarck declared that "next time" he would insist upon paying the indemnity instead of receiving it. Although the panic of 1873 brought severe losses and great disillusionment to workers and capitalists alike, German industry recovered and with few setbacks continued to expand until 1914. This industrial expansion led to a pronounced and increasing emphasis upon vocational education.

Administration under the empire was bureaucratic, that is, it was carried out by appointive officials and boards who were not directly responsible to the people. This, taken with the extensive social welfare and relief legislation which was passed, makes it an apt comparison to say that

the policy of the empire was a continuation of the patriarchal and benevolent despotism of Frederick the Great and his contemporaries. An aggressive nationalism developed and led to German colonial expansion and to competition for world markets. And nationalism had important domestic consequences, for it brought the government into conflict with all agencies that competed with it for men's loyalties, and especially with the Catholic church. The Lutheran church, being a state institution, was more amenable to pressure from the government. The struggle, known as the *Kulturkampf*, began about 1850 and was resumed in an intensified form under Hitler, although the same name was not applied. In the earlier phase of this German cultural war, Bismarck secured legislation which drove the Jesuits from Prussia (1872), suppressed the Catholic bureau in the ministry of education, withdrew all schools from church control, and provided for their inspection by qualified, nonclerical officers of the state. These are known as the "May Laws" of 1873. They were given a moderate interpretation. Falk, the minister of education of Prussia, removed only a minority of the clerical inspectors. Ultimately, Bismarck had to give way. When Leo XIII became pope (1878), Bismarck opened negotiations with him and the cultural war ended in a truce with the church.

Nationalism was also attacked from the opposite side by the radical socialists. Although socialism of many kinds had existed for centuries, the Marxian form which developed in Germany in the Bismarckian period was new, vigorous, and hostile to the nation-state and the church as well as to private capital. There were some considerable social evils. Some of these resulted from Bismarck's policies, the hegemony of conservative Prussia, royalism, a strong army not subject to the will of the people, and bureaucratic government; and others, as in all countries, were the evils growing out of the industrial revolution. The factory divided the work of each laborer into the smallest possible fraction and robbed him of all joy in it. Every boom period drew a new labor supply into the towns which enabled the employers to cut wages, increase hours, and employ women and children. Stupefying drudgery and inhuman living conditions in the best times alternated with periods of unemployment when only the soup kitchens barely prevented starvation. There was no adequate provision for illness and old age. These conditions contributed to the development of socialism in Germany. Ferdinand Lassalle (1825-1864), a revolutionary of 1848, founded the Socialist Party; and Karl Marx (1818-1883) promoted the international working-class movement and a somewhat different brand of socialism. In 1875, a fusion was effected; the platform, adopted at Gotha, demanded public ownership and control of industry. The Socialists insisted upon universal suffrage of men and

women by secret ballot, a free press, a progressive income tax, health legislation, the prohibition of child labor, and other social reforms. The socialist vote increased rapidly between 1880 and 1890.

Bismarck replied to the socialists with the weapon he had already used against the church, repressive legislation. A murderous attack upon the life of the emperor gave him the needed opportunity. He dissolved the Reichstag; and the newly elected house agreed to a law prohibiting all socialist meetings and publications with severe penalties. Yet the socialist vote kept on increasing in successive elections. Then the attempt was made to draw the teeth of the opposition by extensive social legislation. Old age and disability insurance, government aid in sickness and accidents were voted but without conceding the main point, that the people should have a greater voice in government. The state benevolently relieved distress but its authoritarianism prevented it from securing the loyalty of the laboring class. And the greatly extended social legislation after Bismarck also suffered from the same basic defect.

6. EDUCATION UNDER THE EMPIRE

In educational legislation also the attitude was similarly paternal, cautious, and restrictive. The effort was not to make people critical and independent but on the contrary to make them orderly, vocationally efficient, satisfied with conditions and their position in life, and submissive to the authorities. In vocational education, especially, Germany became a leader. There were already, from 1850 and earlier, a great many local vocational schools and classes and most of the new vocational schools were developed by the towns, the employers, and the local authorities in general, not by the empire or even the states. In the later nineteenth century, the vocational continuation or part-time school for young people who already had jobs became widespread. Even before the formation of the empire, the old North German Confederation made it compulsory for workers under the age of eighteen to attend continuation schools for a specified number of hours a week, and for employers to release them from work for that purpose. This law was retained by the empire.

One defect in the situation was that there was no law requiring the establishment of vocational continuation schools, and even in 1918 about half of the states had only permissive laws on this subject. Where there were no schools with classes in the particular trade in question, the young workers could not, of course, be required to attend. Most localities had some schools but few had so full a complement and so extensive and effective a system as the one developed by Georg Kerschensteiner, about 1898 in the South German city of Munich. Kerschensteiner was one of the

leading educators of Europe in the period before World War I. In 1913 he visited and lectured extensively in the United States. Upwards of fifty somewhat distinct trades and vocations, including the commercial vocations, were taught in the public schools of Munich. Besides the trade schools there were others for preparing foremen, superintendents, and personnel workers in general. A second defect of these schemes was that they continued class education.

Meanwhile higher vocational education in science and its applications had an extraordinary development. The universities, beginning with Liebig (1826) or earlier, gave more and more attention to the sciences and, through their emphasis upon research, made many fundamental discoveries. German medical education was world famous and, at a time when our medical schools were undeveloped, they served as examples for the United States. Besides the universities, Germany also had great technological schools in agriculture, engineering, mining, and other applied science fields. The industrial growth and technical competence of Germany rested squarely upon an excellent system of education for the learned vocations and professions.

Teaching in the lower schools was one of the vocations to which special attention was given in the legislation of Prussia and other states. The Prussian general regulations of 1872 dealt with the curriculum of the seminaries in which the future teachers of the elementary schools received their professional and much of their general education. In comparison with the regulations of 1854, these were liberal and enlightened but in making the comparison we must remember that the earlier rescript had been an angry response to the revolution of 1848. Under the regulations of 1872, the reading of the students was broadened to cover general history followed with German history, the classical German literature including such un-Prussian authors as Goethe and Schiller, and the great educational classics. There were courses on logic, psychology, and the history of education. The German language, grammar and composition, were studied thoroughly; and foreign languages, including French, were offered as electives. The work in science and mathematics covered what would be included in a good American high school in these areas. The biology and earth science had a considerable resemblance to general science. Religion, since it was one of the subjects in the common school curriculum, was taught in the teachers' seminaries. Bible history, the gospels, the parables, hymns, and church history were stressed and, while the instruction was less confessional than it had been, the emphasis upon memory work was retained. There is a diverting but unfriendly account of the work of the teachers' seminary in the autobiographical works of the schoolmaster-author, Otto Ernst.

At a later date the curriculum was further extended, but the teachers' seminaries were not made a part of the secondary-higher education of Prussia. Common school teachers were kept a race apart from the higher professional class of society and, except in Saxony, had no opportunity to attend the universities. A boy who wished to teach in the elementary schools was first sent to these schools, then to a seminary for six years and, after a trial year as an assistant, was installed in his own school. Now and then one left this employment to attend the secondary school and the university—Kerschensteiner is an example—but in that case he never returned to the lower schools unless, like Kerschensteiner, he became an administrator.

Until the establishment of the Republic (1918), Germany had a dual system of schools, one path for the common people down in the valley and another on the heights in the bright sunlight for the professional and official classes. This was, evidently, a necessary element in the system of caste and privilege which had been written into the imperial constitution.

One small dent in this armor of the privileged classes was made by the pressures of social democracy. The general regulations of 1872 permitted the erection of a new type of expanded and elevated common school, called the Middle School. While the common schools were entirely free, the Middle Schools charged a tuition fee. The name was doubly appropriate because, educationally, the Middle School occupied an intermediate position between the lower and secondary schools and, socially, it was the school of the lower middle class such as minor officials and retail businessmen. The schools provided for these a more extensive and socially exclusive education than the common schools, but it had other qualities to commend it. The course varied in length from three to nine years. In the former case, children transferred to it after a certain number of years in the common schools. In the upper years of the Middle School courses, work more advanced than that of the lower schools and, in particular, English, French, and Latin, was offered. It was this which made possible the pupils' transfer from a middle to a secondary school and thence to the university. Few took this path, so difficult for the children of the poorer classes; but boys who completed the full Middle School course, having studied two foreign languages, got off with one year in the army and had access to skilled and semiprofessional occupations. These schools were found only in larger cities and before 1914 about one child in twenty-five in Prussia attended a Middle School.

By the end of the nineteenth century, three types of secondary schools had been developed. All were boys' schools although there were also comparable schools, much fewer in number, for girls. Coeducation on the secondary level was practically unknown in nineteenth-century Germany.

Each of the boys' schools had a nine-year course and their graduates were admitted to the university without examination. The oldest type was the *Gymnasium*, an early example of which was established by John Sturm in 1538. We have seen that Humboldt had helped to standardize this type in the second decade of the century through a leaving examination and certificate. A second type was the *Realgymnasium*, a Latin-scientific school which in some cases taught Greek as an elective, never as a required subject. The time saved by the omission of Greek was given to modern foreign languages. The *Realgymnasium* was more popular in southern Germany than in Prussia. It was an intermediate school between the *Gymnasium* and a third type, the *Oberrealschule*. This latter school, in which neither of the classical languages was studied, emphasized mathematics, science, and modern languages. The type goes back historically to 1747 when a *Realschule* was opened in Berlin. This was only a six-year school and when the type was changed to a full nine-year school the word *Ober*, or higher, was prefixed to the name.

All of these types also existed as part-course or six-year schools, with slight changes of nomenclature which we need not specify. The reason for these part-course secondary schools will appear in a moment. In addition to the major subjects we have named, all of the schools taught religion, German, history, singing, handwork, physical education, and other subjects, twelve to sixteen in all. The average weekly schedule comprised about thirty recitation periods, but not all of these subjects required outside preparation. The course, however, was stiff beyond the dreams of the average American high school boy.

After three years in a common school or in a public or private preparatory school in which elementary subjects were studied, the boy at the age of nine entered a *Gymnasium*, or a *Realgymnasium*, or an *Oberrealschule*, and at eighteen he was ready to enter the university. This assumes that he completed a year's school work in each year without repeating. None of the ten or twelve subjects assigned to the year could be omitted, nor were substitutions allowed, although if a pupil stood high in the major subjects, German, foreign languages, mathematics, and science, the staff would exercise some leniency in its rating of the minor subjects. But the promotions were annual events and the pupil who was considered to have failed was compelled to repeat the work of the whole year. Let us note again that all subjects were prescribed. Electives, if any, were extras and were not required for graduation. As a result of this system, the pupils at graduation were on the average about twenty years old. Pupils who completed the first six years of a secondary school course were required to spend but one year in military service, instead of the customary two or three years. A large number of pupils who had difficulty with their studies, or who were

poor, or who for other reasons could not go to the university, consequently left school at the end of the sixth year. This was one reason for the popularity of the six-year school; and another reason was that many towns were too small or too poor to support a nine-year school.

7. EDUCATION UNDER THE REPUBLIC

The constitution of the German Republic, adopted after World War I at Weimar, contained (Art. 1) this declaration: "The German Reich is a Republic, the political power emanates from the people"; and this admirable general statement (Art. 148) on education: "In all schools effort shall be made to develop moral education, a sense of responsibility for the public welfare, personal and vocational competence in the spirit of German nationality and reconciliation with the nations." Unfortunately, "the nations" and powerful sections within the country did little to promote this reconciliation. Germany had lost her colonies and her markets; economic conditions were unpropitious; and the German people soon became so divided politically that it was difficult for the nation to pursue a progressive policy. The constitution went on to say that the central government "may define the guiding principles for the educational system, including higher education; that the public school system is to be developed as an organic whole, and the middle and higher, that is secondary schools, are to be extensions of a common school."

These sections provided, for the first time, the basis for a national school system on the plan of an educational ladder which should open the universities to the common people and to the teachers of the elementary schools. The most liberal among the educational leaders tried to revive Süvern's proposal of 1817 for the development of a single school system which should provide a common education throughout the elementary school years and should open freely the various vocational, liberal, and professional doors to the young adolescent. This program, which would have abolished the dual system, was not to be realized. The general school law of 1920 did, however, provide for a four-year public elementary school that was to be common to all children. The new institution was called the foundation school (*Grundschule*). The public preparatory schools to prepare the children of the wealthy for entrance to secondary schools were closed in 1924; and the private schools of the same kind were to be abolished in 1929. This would have lengthened the course for secondary school pupils from twelve to thirteen years, and in 1925 the general school law was amended to permit capable children to transfer to the secondary schools after three years in the *Grundschule*.

Although the constitution prescribed that the education of youth should

be carried out in free public institutions, it permitted the establishment of private schools which should fully meet the standards and appointments of the public schools; private elementary schools were allowed only for experimental or conscientious reasons, and all private schools had to be approved by the state. The constitution both guaranteed religious freedom and decreed that, except in the comparatively few secular schools, religious instruction must be a part of the regular curriculum. This suggests the fact that there was a serious religious problem in education. Several unsuccessful attempts were made, the last in 1927, to authorize the establishment of sectarian, interdenominational, and secular schools as a community might decide. But comparatively few parents exercised their right to withdraw children from all religious instruction. The right to inspect schools was taken away from the clergy. Attendance was made compulsory for eight years full time; and, beyond that period, for four years part time at free continuation or vocational schools. The lack of schools and of money for their establishment prevented the enforcement of the latter clause in many communities. The constitution provided that the central government, the states, and the local units were to cooperate in the promotion of education; but, actually, each of the states developed its own system as in the United States although, also as in the United States, there was considerable similarity in these systems.

In Prussia the Ministry of Public Education had the general direction of the schools and also of the cinema, stage, public museums, and the fine arts. Some phases of child welfare and other activities related to education were controlled by other departments. The spirit of educational administration was greatly liberalized. Instead of authoritative decrees, the ministry now set up standards, offered guidance and suggestions in matters of curricula and methods, and gave opportunity for local adaptation to community and individual needs. Within this pattern a new type of secondary school, the six-year *Aufbauschule*, was organized for those gifted children, chiefly from the lower classes, who were unable to begin secondary classes at the age of nine and to carry them on for nine years. Through the *Aufbauschule* such pupils, entering the secondary school at the age of twelve and finishing at eighteen, were enabled to prepare for the university in six years. Finally there was also created a fourth type of nine-year secondary school called the *Deutsche Oberschule*. Some schools of this type were established in all the states except, apparently, Bavaria. These schools based their curriculum upon German culture rather than upon classical or mathematical-scientific subjects; and they were given a co-ordinate place in the system beside the *Gymnasium*, *Realgymnasium*, and *Oberrealschule*.

The training of teachers was to be conducted according to the principles

which applied generally in higher education and teachers were to have the status of public officials. These provisions of the constitution were intended to apply particularly to teachers of the elementary schools. It was intended that future elementary teachers should first complete a secondary school course and that their further and professional preparation should be completed in the university; but economic conditions and party politics prevented the realization of this ideal. In those states where a liberal party was in power for a time after the Revolution of 1918, the necessary transformation of the teacher education program was begun but all this was swept away later when the conservatives returned to power. In some states teachers were prepared partly in the university and partly in a teachers' seminary. In general the attempt to make teacher education a part of the secondary-university system was not successful.

The productivity of German writers in the fields of psychology, philosophy, and history of education and of methods of teaching is well known. No other language has so extensive a literature of books, monographs, and magazines on these subjects. Several of the factors which were at least partially responsible for this educational ferment were the bureaucratic management of the schools, the decline of interest in school and university work among the students themselves, the German youth movement, progressive education, and the collapse which eventuated in the formation of the Republic.

During the late nineteenth century, it was frequently noticed that pupils in the secondary schools and students in the universities no longer had the enthusiasm for study which had characterized their fathers and their grandfathers in 1830 or 1870. The reasons were found in the formalism of the schools and the academic and the purely intellectual and abstract nature of their work. Music, the arts, social problems, manual and constructive activities, and the development of the will and of individual responsibility were neglected. Rigid standards and great overpressure militated against the development of personal interests. When the students entered the university, they found themselves completely free from all control and even guidance; and the tendency grew among them to waste their time during the early years of the university course and to attempt to make up for this by cramming for a few semesters before the final examinations. Alcoholism and other vices had made great inroads among students.

There was also an economic-vocational problem. Thousands of young men after achieving a doctor's degree found that they could not find a secure place in the professions or could do so only after many years of waiting. The country had become oversaturated with "learned" men and an academic proletariat was forming. This body of the disillusioned and discontented formed fertile ground for social revolution and radical measures

of many kinds. Even the elementary schools, although they were set apart as the schools for the lower classes, tended to become authoritarian and to be guided by the intellectual aims of the higher schools. German education, so highly admired by much of the outside world, was ill with a complication of maladies. Industrialism, the great cities with their luxury and their slums, the insecurity, not only of the poor, bureaucracy and repression, and the worship of material success, which plagued other countries also, were basic causes of social ill-health.

The German youth movement was one of the most spectacular protests against these conditions. It was begun by Karl Fischer, a pupil in a Berlin gymnasium, with the organization of the Wandervogel in 1896. The Wandervogel was a hiking club whose members wished to come into close contact with nature and the peasants. They attacked the compulsions of the school with its Wissensballast of dead information and its success philosophy. They opposed themselves to the social and secret associations which were analogous to American Greek letter societies. They stood for simplicity, physical health, wholesome human associations. Other societies were formed on similar lines. The Hamburg Wanderverein of 1905 cultivated folk songs and dances, conducted walking tours to come in contact with peasant life, and held discussion meetings. Most of the youth societies in one way or another stressed the simple life and fostered a "back to nature" movement.

When the first Liberal Congress of German Youth was held (1913) on a mountain top near Cassel to form a closer union and to celebrate the centennial of the liberation of Germany (1813), the delegates from thirteen youth associations numbered several thousand. The Congress declared that youth must chart its own course without adult interference, although most of the speakers and leaders were adults, some of them teachers. One of the most influential was Gustav Wyneken, founder of a radical progressive school. Physical fitness, self-control, community spirit, and love of the Fatherland were set up as goals, and a pledge against alcohol and nicotine was exacted.

Under the Republic, political purposes came to play an increasing role. Girls had come into the movement early and a great many girls' associations were formed. The German youth movement spread throughout the country but became less and less harmonious as political activity grew within it until 1933, when all the various societies were by command merged into one, the Hitler Youth.

In scouting and in the gradually developing youth hostels and trails, we have the slight beginnings of a similar movement in the United States. We have no autonomous youth movement, however, although in the colleges there are a number of associations with political aims. The German

youth movement might well be studied by us, as a symptom and in its outcome as a warning.

An attempt to show how some of the defects of the schools might be overcome was made by the founders of experimental schools. Hermann Lietz, one of the pioneers of the new education in Germany, was much influenced by Herbart and directly by Cecil Reddie at whose school, Abbotsholme, in England, he taught for one year. Returning, he developed his own "country home schools," Ilseburg first (1898) and others elsewhere. Manual labor, music and the fine arts, hiking, projects, a varied curriculum, comradeship between teachers and pupils were some of the features. Teachers whom he had trained established other schools. One difficulty, the matter of expense, kept such an education from spreading.

Most of the recent educators of Germany have been concerned with the place of the individual in the social order. Most of them have been individualists, even those, like Spranger and Litt, who derived their values from a theory of culture and those who began with the demands of society and community as Gaudig and Kerschensteiner did. Friedrich Paulsen, the beloved teacher of many American students at the University of Berlin, was for a generation the most uncompromising foe of bureaucracy and was bold enough to brave the wrath of Kaiser William II. More recently and far more radically, Paul Oestreich has preached the complete freedom of the child from all prescription. All this was wiped out in 1933 and Germany returned to uniformity and authoritarian control of the most extreme kind. More will be said on the National Socialist changes in the last chapter of this book.

One victory for democratic education was won by the Republic through the establishment of the *Grundschule*, which brought all classes of the people together for four years in their early childhood and which led to the closing of the separate preparatory schools for future secondary school pupils. And this was the only important victory. The *Aufbauschule* and *Deutsche Oberschule* were to make secondary education more accessible to the people, but few of these were successful. Fees for secondary education were not abolished. Most of the secondary school teachers were hostile to the principles of the Republic. While many more pupils attended the secondary schools than before, they were, as in France, prepared only for the already overcrowded professions. The secondary schools did not offer a cultural and vocational education for practical life.

The result was inevitable. It has been estimated that in 1932 there were fifty thousand unemployed professionals in Germany, and many of this intellectual proletariat accepted the promises and assumptions of Hitler. Neither Germany nor France did enough to bring culture and vocation together and to open a way for people of all classes to raise themselves to

the level appropriate to their abilities. Both were hampered by the philosophy and institutions of a stratified society. A democratic system should unite the people and not set them against each other. To do this it must be flexible, enabling those who may have made wrong vocational choices to correct their errors, assisting those who are poor but capable to raise themselves to higher levels, and aiding the adventurous and the gifted instead of suppressing them. In these respects the German system, even under the Republic, was not sufficiently democratic.

8. GERMAN INFLUENCE UPON AMERICAN EDUCATION

German immigrants brought new educational ideas and institutions to the United States, such as the outdoor gymnasium, the *Turnkunst*, and the kindergarten. They also provided a tough Americanization problem which is not yet altogether solved. Other influences came through books and magazines, through visitors, either Americans visiting in Europe or Germans spending some time in the United States, and most of all by American students returning after a period of study at a German university. We should remember that Alexander Dallas Bache, Calvin E. Stowe, and Horace Mann wrote influential reports of their visits to German schools, that many important American chemists were trained in German laboratories, that the historical seminar and the doctor of philosophy degree were imported from Germany, that the German language was for many years the modern foreign language most studied in our high schools and colleges.

The *Turnkunst* has been carried on chiefly in the greater German centers in large cities. There were, however, a few examples of Jahn's system and outdoor gymnasiums introduced early into New England by refugees after the revolutionary movement of 1830. The names of Charles Beck and Charles Follen are connected with this effort, which aroused great enthusiasm for a short time and then came to an early end. The same can be said of the private secondary schools in New England which were modeled on the German *Gymnasium*. Among these were the Round Hill School established by George Bancroft and others and Sereno and Henry E. Dwight's New Haven *Gymnasium*. Our four-year college and the public high school precluded the wide adoption of a nine-year secondary school.

The German teachers' seminary affected the American normal school by its example, but its program and curriculum were not closely followed. The effectiveness of the German teachers' seminaries became known in the United States through Cousin and several American investigators, and that knowledge clearly furthered the establishment of the state normal schools, but without affecting their curricula or administration to any

marked degree. The normal school was an American institution. But, through Horace Mann, the methods of the elementary schools and, through S. G. Howe and Mann, the education of the deaf, were influenced by German example. Early state administration of schools and the centralization of educational authority in the state were frequently attacked by American publicists on the ground that they were borrowed from autocratic Germany. This argument was used in 1840 in Massachusetts against the State Board of Education and has often been confused with the contemporary attack upon the normal schools. The chief charges against the latter were that they were ineffective, unnecessary, and expensive, not that they were foreign importations. The American elementary school organization owed little or nothing to Germany; but the methods of teaching were affected somewhat by German example and much more by the theories and demonstrations of Pestalozzi, who was an Italo-German-Swiss, and of Herbart and Froebel, who were wholly German. The playground movement, physical education, and music education show German influence; and the kindergarten was a direct importation from that country. The American kindergarten, however, soon diverged from the path marked out for it by Froebel.

Of all our educational institutions, Germany had the greatest influence upon the college, for it was to a considerable extent German example and teaching which transformed our colleges into universities emphasizing advanced study, investigation, economic and technical applications, and the development of research and independent graduate work. A new and great era of university history was opened by the establishment of the University of Berlin in 1810; and it was at that moment in their evolution that the influence of the German universities upon American education began.

German influence was introduced by students returning from German universities, where they had been welcomed and accorded all the available educational facilities. And the American students seem to have done very well, although they lacked the severe training which the German gymnasium provided. The results of that rigorous course were sometimes criticized even by the Germans themselves. One such criticism was reported by a young American, James Henry Breasted, who studied at the University of Berlin about 1890. Writing home, Breasted said: "Yesterday, I heard Virchow's inaugural speech as Rector of the University. His intensely interesting address touched German education in general, and disapproved of many features. One statement especially interested me: he said that many foreigners have come into the universities without having had the benefit of the severe training of the German gymnasium and have done just as good work as the Germans. Something, he therefore argued, is wrong with the gymnasium."

The influence of the German universities upon the American when it got fully under way was potent, widespread, and in the main beneficial. It was transmitted by students who went to Germany, one in 1799, another in 1811, four about 1820, and ten thousand altogether in the course of the century; and these, after shorter or longer periods of study at one or more institutions, returned home, many of them with a doctor's degree, to become college or university research workers, scholars, and professors. Besides the higher degree, they came back with a fund of knowledge, with new methods of work in investigation and teaching, and with a devotion to learning and its uses in private and public life such as our own meagerly equipped institutions were unable to give or to call out.

Several hundred Americans had studied in Germany before 1850 and the numbers increased very rapidly decade by decade until 1890; they then began to decline and, with the outbreak of World War I (1914) and the American entry in 1917, dropped to zero. The University of Berlin enrolled the largest number, with Leipzig, Heidelberg, Halle, Bonn, Munich, and Göttingen, in about that order, attracting smaller but still considerable contingents. Several of the early migrants, George Ticknor for example, studied literature and languages; but the development of Liebig's laboratory at Giessen, opened in 1826, and Wohler's and other laboratories elsewhere attracted some young American chemists soon after 1830. The younger Silliman and others of the School of Applied Chemistry at Yale followed German examples. The doctor of philosophy degree, first granted in the United States at Yale in 1861, was imported from the same source. Eventually, all the liberal arts and sciences and the old professions, theology, law, and medicine, drew American students. As a temporary but important phase of this migration, the Herbartian pedagogy attracted about fifty American students, chiefly to Jena and Leipzig.

There were no graduate schools or advanced and research courses in American institutions before the nineteenth century. These were to a great degree a result of German influence. The first well-organized and adequately staffed graduate school was Johns Hopkins, opened in 1867, although Yale and Harvard had been making efforts in the same direction. Through the example of Johns Hopkins, aided by the vast expansion of higher education, the increase in the number of colleges, and the development of the state universities, the field for collegiate and graduate instruction in the United States expanded at a phenomenal rate. The German university seminar, research work, the doctor of philosophy degree, the expansion of laboratories and libraries were all introduced or greatly stimulated by students returning from Berlin, Leipzig, or their sister institutions. One of the fields of study which was entirely transformed and rapidly expanded by the movement was the field of psychology. Shortly after

Wundt opened his psychological laboratory at Leipzig in 1879, American students flocked to it. G. Stanley Hall and J. McKen Cattell were among the first, and they and their contemporaries developed new phases, such as educational, differential, and functional psychology, and founded psychological laboratories and journals.

American students attended German universities because they were freer, more accessible, and had more to teach us than those of other countries. Academic freedom, however, was never as unqualified as has sometimes been asserted. On political and social questions, the professors usually agreed with the state. The faculties and the state usually saw to it that unsafe men were not appointed to professorships. But outside this danger zone, *Lehr- and Lernfreiheit* were great indeed. Not only was there freedom of teaching, but the professors were qualified to teach by their learning, industry, and capacity in their fields. When George Ticknor, after graduating from Dartmouth and living under the shadow of Harvard among some of the best American scholars, went to Germany, he was astounded by the depth, breadth, and originality of the scholarship of his Göttingen professors. The same experience was repeated by many of Ticknor's successors. Many Americans went to secure special training in research or to use the great European libraries and laboratories; some to secure the advanced degree and prestige of foreign study; and some merely combined study with travel and a period of residence abroad. An important item is the fact that residence at German universities was less expensive than at Oxford and Cambridge; and the English institutions did not offer the advanced work nor the degree of doctor of philosophy which was becoming a prerequisite for appointment to an American professorship. Before World War I, the United States had learned many of the lessons which Germany had to teach us and our facilities in scholarship and equipment had in many fields begun to rival and even to excel theirs. Even so it is still true that foreign study in England, France, or elsewhere provides stimulation and a broadening experience which are not readily obtainable at home.

The German states began to take an interest in the schools at the Reformation; and did so to a greater extent in the eighteenth century, when the benevolent despots began to direct education toward national purposes. But it was in the nineteenth century that they created universal, public education in Prussia and Germany. Accepting many of the principles of the French Revolution and Napoleon's policy of universal military service, the youth of the country united to repel the conqueror and to create a liberal Germany. In education their success was hardly greater than it was in politics, yet something was accomplished. Taking Prussia as our example, they formed a central educational administration, established the University of Berlin (1810), reformed the second-

ary schools, and, most important, remodeled the common schools and the teachers' seminaries on Pestalozzian principles. There was a galaxy of democratic leaders that rivaled the American group of the same period (1810-1850); but the first conservative reaction (1819) came within a decade, and the subsequent history of German education oscillates between successive waves of liberalism and autocracy.

Under the empire, the May Laws (1873) made the schools more secular and repressed Catholic and, in general, clerical influence. In that period of rapid industrialization, Germany became the leader in vocational education. This development was aided not only by the demands of industry but also by the sharp division into social classes which made it easy to direct working-class youth into a definite vocation at an early age. In the nineteenth century also many secondary schools were opened and the *Realgymnasium* and *Oberrealschule* acquired the right to prepare pupils for the university. A new type of school, called the Middle School, was established in some cities. This made it somewhat easier in the favored localities to transfer from the common school to the secondary school.

The Weimar Republic took the creation of a unitary, or ladder, system as one of its goals; and it actually established a four-year common school for all children. This school, the *Grundschule*, brought all classes of children together for a short period, after which they were separated as in previous times. Beginning as early as 1850 and continuing under the Republic, education was agitated over many serious problems: bureaucratic administration, overpressure of pupils, decline of interest in school, increased youthful vice, the overcrowding of the professions, and the hostility of many secondary school teachers to the Republic.

Through German literature and official reports, through immigration, and especially through the thousands of Americans who studied in Germany, that country has exercised a potent influence upon education in the United States. This influence has been greatest at the extremes of our system, in the lower grades and in the university; the high school has been much less affected.

QUESTIONS

1. Why did the German states introduce compulsory attendance requirements earlier—and how much earlier—than other states?
2. How does the "educational strategy" of autocracy differ from the policy of democracy?
3. Compare the educational conditions and policies after military defeat, in Prussia after 1806, in France after 1870, and in Germany after 1918.
4. Consider the complementary effects of education upon politics and of politics upon education during revolutionary crises.
5. Why was it easier to carry out a scheme of compulsory vocational education in Germany than it would have been in the United States?
6. Using Russell's *German Higher Schools*, or Kandel's *Comparative Education*, compare the amounts of work demanded in the German secondary school and the American high school. How do you explain Virchow's judgment quoted on page 338.

7. Why, in your opinion, were German secondary school boys of 1900 less interested in school work than their fathers and grandfathers had been?
8. In what respects, if in any, do you agree that German influence upon American education was beneficial? Was this due to the excellence of the German schools, to the weakness of ours, or to our wisdom in borrowing?
9. Study and evaluate the educational experience of George Ticknor in American and European schools and universities.

FOR FURTHER READING AND STUDY

There are many German encyclopedias of education which cite the literature on each important topic. We shall name only two of the more recent ones, as follows: Ernst M. Roloff, *Lexikon der Pädagogik* (Freiburg-im-Breisgau, 1913-1917, 5 vols.) and Hermann Schwartz, *Pädagogisches Lexikon* (Leipzig, 1928-1931, 4 vols.). The *History of Secondary Education* and the *Comparative Education* by I. L. Kandel, and E. H. Reisner's *Nationalism and Education since 1789*, which were given in the preceding chapter, apply also to this one and to the chapter on England. We include below some works by Kandel, Kneller, Lindegren, and others which deal with the latest phase of education in Germany; and this subject will be further noticed in Chapter 21.

- Alexander, Thomas, *The Prussian Elementary Schools*, New York, The Macmillan Company, 1919, 511 pp.; and, with Beryl Parker, *The New Education in the German Republic*, New York, The John Day Company, 1929, 387 pp.
- Barnard, Henry, *German Educational Reformers*, Hartford, Conn., Brown, Russell and Gross, 1878, 724 pp.
- Fletcher, Arthur W., *Education in Germany*, Cambridge, England, W. Haffer and Sons, 1934, 61 pp.
- Heman, Friedrich, *Geschichte der neueren Pädagogik*, Leipzig, A. W. Zickfeldt, 1921, 588 pp. Revised edition.
- Henderson, Ernest F., *A Short History of Germany*, New York, The Macmillan Company, 1902, 2 vols.
- Hillard, George S., *Life, Letters, and Journals of George Ticknor*, Boston, James R. Osgood and Co., 1875, 2 vols.
- Kandel, Isaac L., *The Making of Nazis*, New York, Teachers College, Columbia University, 1934, 143 pp. Also found in the eleventh Yearbook (1934) of the International Institute of Teachers College, Columbia University. A bibliography is given. Each volume of the Yearbook from 1924 to 1934, excepting that for 1930, contains one or more articles on Germany.
- Kneller, G. F., *The Educational Philosophy of National Socialism*, New Haven, Yale University Press, 1941, 299 pp.
- Learned, W. S., *The Oberlehrer; a Study of the Social and Professional Evolution of the German Schoolmaster*, Cambridge, Harvard University Press, 1914, 150 pp.
- Lexis, W. H., *A General View of the History and Organization of Public Education in the German Empire*. Translated by G. J. Tamson, Berlin, A. Ascher and Co., 1904, 182 pp.

- Lindegren, Alina M., *Education in Germany*, Washington, Government Printing Office, 1939, 145 pp. Bulletin No. 15, 1938, Office of Education. Useful for its collection of secondary curricula as well as its brief treatment of National Socialist education.
- Moog, Willy, *Geschichte der Pädagogik: die Pädagogik der Neuzeit vom 18 Jahrhundert bis zur Gegenwart*, Leipzig, A. W. Zickfeldt, 1933, 540 pp. This is the second volume of a general history of education from the Renaissance; but it is especially complete on German education.
- Paulsen, Friedrich, *Geschichte des gelehrten Unterrichts*, Leipzig, Veit and Co., 1896-97, 2 vols.; *German Education, Past and Present*, Translated by T. Lorenz, New York, Charles Scribner's Sons, 1928, 310 pp. Paulsen was an educational liberal and the inspiring teacher of many Americans who studied at the University of Berlin. His little book on *German Education* is a classic in the field. He also wrote several important philosophical works and was a constant contributor to periodicals.
- Pinnow, Hermann, *History of Germany; People and State through a Thousand Years*, Translated by Mabel R. Brailsford, New York, The Macmillan Company, 1933, 473 pp. A good short history in English giving special attention to social and popular developments.
- Russell, James Earl, *German Higher Schools; the History, Organization and Methods of Secondary Education in Germany*, New York, Longmans, Green and Company, 1899, 455 pp.
- Scott, Jonathan French, *Patriots in the Making*, New York, D. Appleton & Company, 1916, 262 pp.
- Thwing, Charles F., *The American and the German University. One Hundred Years of History*, New York, The Macmillan Company, 1928, 234 pp. Sketchy but containing information not otherwise readily available.
- Walz, John A., *German Influence in American Education and Culture*, Philadelphia, The Carl Schurz Memorial Foundation, 1936, 79 pp.

15 EDUCATION IN ENGLAND

ENGLISH EDUCATION HAS BEEN LESS CONSCIOUSLY NATIONALIST than that of France or Germany but, as in the continental countries, it has suffered from the division of the people into social strata. The English have achieved the difficult task of forming a stable society of such conflicting elements as social and economic aristocracy, political democracy, and religious freedom. It is especially remarkable that they have done this in a situation which has shielded them from direct attack. But the political democracy and religious freedom of England have not been altogether favorable to the development of schools and to free and generous provision of education for all.

Education was long considered to be the province of the home and the church. Religious toleration and the growth of large bodies of dissenters made the religious question in education a difficult problem. Traditionally, the English have held that the activity of the government should be restricted to essential matters of state and should not interfere in such a social, church, or private interest as they conceived education to be. This traditional feeling, although now declining and perhaps disappearing, was strong within recent times. Finally, the considerable, although partial, success of private and philanthropic agencies in providing schools operated to restrain vigorous public effort. As a result of all these factors, England trailed the continental countries by as much as a half-century in the development of public schools.

1. EARLY BEGINNINGS

The first schools were probably established in Roman times. Roman Britain sent three bishops to the Council of Arles in A.D. 314 and since there were churches there were, no doubt, also schools. These were destroyed after the Romans withdrew from the island; but before A.D. 800 Christian schools had again been established and had become notable.

They produced such scholars as Aldhelm, in the seventh century, and Bede and Alcuin, in the eighth. The red ruin of the Danish invasions interrupted progress again, but King Alfred encouraged the founding of schools. Schoolbooks in both Anglo-Saxon and Latin were prepared by English scholars in that and later times. Testimony to the flourishing condition of learning a century after Alfred is furnished by Ælfrie, a teacher of about the year 1000, whose schoolbooks, including a glossary, a Latin colloquy with an Anglo-Saxon gloss, and a Latin grammar in Anglo-Saxon, provide first-hand evidence of the educational vigor of that time.

The advent of John Wycliffe in the fourteenth century marked not only a religious reformation but also a democratizing movement. The Black Death and the heavy taxes made necessary by the foreign wars of Edward III helped to produce a social revolution which gave greater privileges to the laboring classes. In religion itself we may see the contrast between an England that was building great cathedrals and a second England that listened hungrily to Wycliffe's "poor priests." The common people were becoming a social force, and the English language, after a long period of neglect which had begun at the Norman Conquest, was again coming into use not only in common life but also in law and in religion.

To teach the common people, teachers and propagandists had to give up the Norman-French and use the vernacular. That is what Wycliffe did. The evidence also shows that many of the common people were sending their boys to school; and that "low-born" Englishmen were claiming this privilege as a right is indicated by the petition of 1391 which asked the king to ordain that no villein should be allowed to send his children to school. The object of the petition was to prevent such children from rising in the social scale "par Clergie," that is, by becoming priests. The king denied the petition; and the Statute of Artificers in 1406, which may be called the first education law in England, confirmed his denial. That law said: "Every man or woman, of whatever state or condition he may be, shall be free to set their son or daughter to take learning at any school that pleaseth them within the realm." The student can follow the subject further in the third volume of Bishop Stubbs' *Constitutional History*.

In the fifteenth century Lollardry, as the Wycliffe movement was called, was crushed and in the process many schools were destroyed and the effort to democratize education came to an end. Instead, the great Public Schools for the privileged classes were established in those years. Among the most famous of these are Eton, Harrow, Shrewsbury and Winchester. Many schools which had been intended for the poor were taken over by the rich. An example would be the hospital school of St. Anthony's which was attended by Thomas More and John Colet. The revival of classical

learning in the following century led to the founding of new grammar schools and the reform of others. Some were founded by businessmen and several were placed under the control of lay boards. St. Paul's was one of the most famous of the schools which were reformed in the classical direction and placed under a lay governing board. This was done by John Colet, the dean of the cathedral; and this fact will enable us to view Colet, as school reformer, in truer perspective than is sometimes done. He introduced into this ancient cathedral school "clean and chaste" authors both classical and Christian but he was not a radical innovator, although it is somewhat remarkable that the dean of a great cathedral should establish a secular governing board.

The educational influence of the English Reformation has been described in Chapter 7. There was a certain slight impulse toward elementary education and Mulcaster urged universal education in the common tongue. The change from a Latin to an English church service was an important result. The Bible and the catechism were introduced into schools, even into grammar schools. John Colet prepared an English catechism for St. Paul's School. But neither the church nor the state actively promoted elementary education; and on the secondary level, the Reformation did not increase but rather reduced the facilities for learning. The Reformation did little for the education of the ordinary poor and for a time less than nothing for the well-to-do; but through the apprenticeship laws it accomplished something for the poorest of the poor.

The second English Reformation, which was carried out by the Puritans in the seventeenth century, promised an educational revival. The Puritan Parliament of the Commonwealth proposed to educate the children of the nation. In 1649 it voted twenty thousand pounds for elementary education. But political conditions prevented the execution of the program and the Restoration (1660) put an end to all efforts in this direction for nearly two centuries. The Restoration laws which were passed to suppress all nonconformist teaching were partly undone by the Acts of Toleration under William and Mary, which again gave the dissenters religious freedom under certain conditions. The court cases of *Bates* (1670) and *Cox* (1700) further loosened the hold of the Church of England, and a law of 1719 removed the last restrictions from dissenting teachers of elementary schools. But the people still occupied opposing educational camps, the Puritans and other dissenters fighting the Anglicans. This made agreement upon a unified national system difficult and delayed the establishment of such a system. It has been truly said that three promising opportunities to establish national education in England were blighted and destroyed, the first after King Alfred, the second in the time of Wycliffe, and the third, by the reaction against the Puritan movement.

2. PHILANTHROPIC EFFORTS

An extensive system of charity schools developed in London and surrounding towns and suburbs near the beginning of the eighteenth century. These provided free education for poor boys and girls, furnished clothing, and helped them to find work. It seems that the charity schools of London were influenced by the similar work of Thomas Gouge (1609-1681) in Wales. Gouge had been a clergyman in London but, having turned Puritan, he lost his pastorate as a nonconformist in 1662. Ten years later, with the permission of the bishops, he began to evangelize and educate the people of a section of Wales. The costs were met by subscription, and a society to spread the schools was formed. Schools on this plan developed in many parts of the country, but their later history is somewhat obscure.

In Anglican circles a similar but more active agency, the Society for the Promotion of Christian Knowledge, was formed by Thomas Bray and associates in 1698. The S.P.C.K. aided members "to set up catechetical schools for the education of poor children" in reading, writing, and especially in the principles of religion. It is almost certain that the founders were influenced by the work of Gouge and that of the German pietist, August Hermann Francke of Halle. In a charity sermon of 1706 by Dr. White Kennet, it was asserted that the schools were directed not only against indifference in religion and dissenting faiths but also against Roman Catholicism. Every charity school was to be "a fortress and frontier garrison against popery." A secondary aim was to prepare children to earn a livelihood; and girls were taught to sew, spin, and knit, and boys were apprenticed to trades. The schools, like those of Gouge, were supported by subscriptions and from the proceeds of annual "charity sermons." They grew rapidly in numbers and had forty thousand children under instruction by 1740. Joseph Addison called them "the glory of the age we live in." Bernard Mandeville, the cynical Dutch physician of London, thought differently. In his *Fable of the Bees* he argued that "To make society happy and people easy under the meanest circumstances, it is requisite that great numbers of them should be ignorant as well as poor." Mandeville's attack is a witness to his belief that the schools were effective. Francis Place (1771-1854), the London tailor who became a utilitarian reformer, condemned the charity schools because they "taught poor children next to nothing, and nothing likely to be useful to them." All of these were prejudiced witnesses and the true verdict seems to be that the schools were a useful agency at a time when a national system or even good private schools were not yet possible.

To carry on the same work in the British Dominions a daughter society,

the Society for the Propagation of the Gospel in Foreign Parts, was formed and Thomas Bray came to America to found schools and to provide libraries for the clergy, the teachers, and their pupils. Although thousands of children in New York and the southern states received at least the elements of an education in the charity schools, the work of the S. P. G. aroused the antagonism of many who had come for religious freedom. Fear of an American episcopate and an established church was one of the factors in the Revolution, and the S. P. G. helped to keep alive that fear. The society remained active in the American colonies until the close of the Revolution. A further extension of elementary education was made by the Sunday School movement which was widely publicized by Robert Raikes, a newspaper publisher of Gloucester, England, and was more directly promoted by the Methodists, the Friends, and other religious bodies. Many, who might have had no teaching otherwise, learned to read in Sunday Schools. Attendance at Sunday Schools, also, carried no stigma of pauperism; and the Bible, as interpreted by workingmen, became an important introduction to social democracy.

3. TOWARD A PLANNED EDUCATION

Public opinion was becoming more favorable to the idea of universal education as the eighteenth century unrolled. At the beginning of the century few were interested; at the end, it was becoming a national question. The whole argument had moved into a new phase. Earlier generations had asked whether the poor should be educated but now the leaders, at least, were asking how the common people, not merely the very poor, could be educated. Not all had arrived at this point. Many still feared that education would make the "industrious classes" discontented with their lot, disobedient, extravagant, and politically radical. In spite of these prophecies of doom, humanitarian and libertarian opinions came to prevail, partly because of the increase of industry and greater material welfare. Although England was gaining the conviction that the people should be educated, she was not yet ready to lay taxes for that purpose. And education was not to be secular or to violate anyone's conscience. How could this be done?

The answer seemed to have been found about 1800 when Joseph Lancaster published a new method of conducting schools cheaply by having the older boys teach the younger. The system was not new, having been brought from Madras, India, by a British army chaplain, Dr. Andrew Bell; and it had also been used by the Jesuits, by John Brinsley, and others; but it seemed novel and as simple and inevitable, once it had been thought of, as the discovery of America or the invention of the steam engine. Indeed, its similarity to the mechanical operation of power machinery and

the factory system was one of its chief recommendations to a practical, industrial people. Actually, it was only the first of the modern "plans" which have so often promised short and easy solutions.

Bell was imitated by Joseph Lancaster. When he was a boy of fourteen, Lancaster was prevented from sailing to Jamaica where he intended to teach the slaves of the sugar plantations. He therefore determined to gratify his passion for teaching in his native country and opened about 1796, when he was sixteen, a school for poor children in his father's house. There he taught reading, writing, and arithmetic for a weekly fee of fourpence. He soon had sixty children and twice that number in the summer. Members of the Society of Friends, which he joined about this time, aided him with funds and his school prospered. About the year 1800 he read a pamphlet published in 1797 by Dr. Andrew Bell, entitled *An Experiment in Education made at the Male Asylum of Madras, suggesting a System by which a School or Family may teach itself*. In the absence of competent teachers, Bell had used those pupils who knew a little to teach those who knew less and now Lancaster enthusiastically adopted the same scheme and vigorously advertised it. The pupil-teachers were called monitors and the scheme the monitorial system. Lancaster's schools were nonsectarian and Bell's Anglican; and that was the chief difference.

By this plan the teacher met his monitors each session and taught them in a class the lessons of the day which each of them then relayed to the small group of perhaps ten children to which he had been assigned. The school was carried on in a single large room equipped with benches, blackboards, and other materials. Lancaster collected and invented a good deal of simple equipment and many devices for use in instruction and discipline. Competition and rewards were used to excess. The schools were organized along military lines. The monitors received for their reward only the lessons which the head of the school gave them and, sometimes, the hope of becoming masters of other schools. They were not paid in money. A large school could be maintained for a whole year for the rent and heating cost of a building and a single salary, the master's. The annual cost per pupil might be as low as one pound or even ten shillings.

A witness from Dr. Bell's schools testified before the Brougham Committee (1816). The following colloquy ensued:

How many can one master superintend, according to your system? I conceive I do not exaggerate when I say 1000. What would be the expense? The room being given, the expenses are, salary to the master, and the expense of books, which is a mere trifle, say £80 a year. The room being given I conceive, 4s. 2d. (\$1.00) a head abundantly sufficient for 500 children. What is the longest time that you take a boy for education? I conceive two years abundantly sufficient for any boy.

Such was the cost and such the conception of education in high quarters.

Though the instruction was mechanical, it succeeded in teaching children the elements of reading, spelling, and arithmetic. Apparent efficiency and the low cost explain the enthusiasm with which the system was received. Henry Holman, a critical historian of English education, has described the reception that was accorded the monitorial system as follows:

The greatest popular enthusiasm was aroused. If it were possible to teach poor children next to nothing for next to nothing—a reasonable equation—by all means let it be done. The king, members of the royal family, nobles, gentry, all subscribed to so pleasing a project. Lancaster was a public hero, and almost every city erected a monument to him, in the shape of a Lancasterian school.

Lancaster had solved, or appeared to have solved, the question of the cost of popular education. He was not so successful in dealing with the religious question. The religion which was taught in his school was too undogmatic, Holman said, too purely religious, for some members of the Church of England. Some became obsessed with the notion that Voltairean ideas and a covert attack upon Christianity lay concealed beneath the smooth surface of Lancaster's system. When the schools began to spread, Dr. Bell, who had taken little interest in the matter, was drawn out of his retirement and whipped up to lead a campaign for monitorial schools in which the catechism and formularies of the Church of England were to be taught. A controversy over originality and priority also arose. Was Lancaster or Bell the inventor? Which one had stolen the other's idea? The controversy may have had a good deal to do with the spread of both systems, but it was a dispute which should never have arisen. Neither was the inventor. Dr. Bell had seen the monitorial system in operation at Madras in India. Lancaster had acknowledged his debt to Dr. Bell in the first edition (1803) of his *Improvements in Education as It Respects the Industrious Classes*. After the fight became hot, he not only ignored his indebtedness but claimed to have invented the monitorial system. Really, he had only "improved" it; and some of his additions, such as the excessive use of emulation, of rewards, medals, and decorations, and of humiliating punishments, were serious defects, not improvements.

Improvements in Education was an important book because it discussed a scheme for a national system of popular education. The education of the people as a whole is a matter of national importance and the greatest obstacle, he believed, was the proselyting spirit of the religious bodies. This could be removed if people would consent to have only "general Christian principles" taught in the schools. Such an education could be made universal; but he was opposed to compulsion. To make the system universal, public funds would be required. Although each sect was per-

mitted to maintain its own schools, a compromise similar to the one which Lancaster had suggested was actually adopted and followed by the government down to 1870 when the public school boards were instituted by the Forster Act.

The monitorial schools performed a useful function and even the controversy over the discovery was fruitful. Combining forces with the S.P.C.K. and Sunday School movements, the monitorial systems prepared the public for the final step toward public education. Two societies were set up to promote the two systems: the British and Foreign Society (1810) to establish Lancasterian schools; and the National Society to spread those of Dr. Bell, also called the Madras system. Each set up a model school and provided some training for its teachers, but as the courses were short, averaging only about three months for each prospective teacher, the training dealt chiefly with the organization and management of schools. By 1835 the National Society had trained about two thousand teachers and had about three thousand schools under its nominal charge. The British and Foreign Society had far fewer, perhaps not over five hundred schools, but many of these were large schools in London. The National Society had established schools in rural parishes, had introduced the Madras system into Sunday Schools, and had taken over some of the S.P.C.K. charity schools. While there are no accurate statistics, it has been estimated that all three of these types, the S.P.C.K., the Sunday, and the monitorial schools, in 1835 enrolled about sixty, perhaps only fifty, per cent of the children of the working classes of England.

The Lancasterian system was introduced into New York City in 1806, whence it spread to most of the larger and many of the smaller cities of the United States, including those as far west as Cincinnati and Detroit. Joseph Lancaster himself came to the United States and an idea of the honor accorded him is to be found in the fact that he was invited to address the two Houses of Congress in a joint session and did so. Philadelphia in 1818 established a city training school for teachers on the Lancasterian principles. The monitorial system remained in use in New York City until 1853, but its active life was much shorter in most American cities. In both England and the United States the system did a great deal to spread the ideal of education for all.

4. INFLUENCE FROM ABROAD

From the beginning of the nineteenth century English educationists began to study the developments which were taking place on the continent. Robert Owen visited Switzerland and established at his mill town of New Lanark the first British infant school (1815), which received chil-

dren "at one year or as soon as they could walk" and retained them until the age of six when they were transferred to the elementary school. Within four years, Henry Brougham and others opened an infant school at Westminster; and in 1824 the London Infant School Society was founded and Samuel Wilderspin became its superintendent. Through his activity, infant schools were rapidly established in England and they have remained a permanent part of the English system. Later the infant school was also influenced by Froebelian ideas but it has, with some notable exceptions, remained comparatively formal, more like a school in its emphasis upon reading and other school skills than like a kindergarten.

About the same time, David Stow of Glasgow was working out his system of preparing teachers; and other students of popular education were introducing the ideas of Pestalozzi and Fellenberg, and of their German disciples. The *Quarterly Journal of Education* (1831-1835) performed for England a function similar to that of W. C. Woodbridge and later Henry Barnard in the United States in acquainting the English with new developments in France, Switzerland, and Germany. The *Quarterly Journal* showed particularly that the elementary curriculum in England was meager and formal compared with that of the best schools abroad and that English teachers lacked the professional preparation which was becoming usual in progressive countries. One who was soon to become the real founder of national education in England, Dr. James Philips Kay (1804-1877), later known as Sir James Kay-Shuttleworth, visited many European schools where he made the acquaintance of Father Girard of Fribourg, of Fellenberg, and of Wehrli, who had conducted Fellenberg's school for poor children before becoming the principal of a Swiss cantonal normal school. Through Kay-Shuttleworth's work in developing teacher training, the ideas of David Stow and of Wehrli were embodied in the English system. From Stow he learned the virtues of the "criticism lesson" in which a skilled teacher taught a class while normal school pupils observed the work which they later analyzed for the purpose of deriving principles. Wehrli taught him that future elementary teachers should develop habits of frugality, patience, and sympathy by sharing the conditions of life of the pupils whom they were later to teach. The Battersea Training School for teachers was founded on these lines in 1839.

Pestalozzian methods were introduced into England and the United States about the same time. In England, Elizabeth Mayo published a book on Pestalozzian object teaching in 1830, the famous *Lessons on Objects*; and her brother Charles Mayo had spent three years at Yverdon following 1819 and upon his return established a Pestalozzian school. The Mayos and others in 1836 organized the Home and Colonial School Society, which brought a famous Pestalozzian, Hermann Krüsi, Jr., to England. Krüsi

later taught at Oswego, New York, but he was not responsible for the Oswego method which was a direct importation (1860) of English Pestalozzianism.

5. RISE OF THE NATIONAL SYSTEM

Education in England as elsewhere had long been the function of the church and the family. To propose now in the nineteenth century that the government should establish and support schools for all the people represented a radical break with this tradition. And, in the second place, not only education but other social matters were considered to be outside the sphere of government and contrary to the individualism expressed in such phrases as "government is a necessary evil," and "a man's house is his castle." English democracy, because it had to create a public opinion in favor of education, made slower progress than highly centralized governments such as the Prussian. And the very success of the voluntary efforts by the S.P.C.K., the monitorial schools, and other private agencies in some cases delayed national education by raising the hope that additional similar efforts might be able to provide opportunity for all without governmental action. Finally, there was no easy solution of the religious question. For all these reasons, national education was achieved a generation or perhaps a half-century later in England than in the advanced countries on the continent.

Some of the steps were the following. The Factory Act (1802), called the Health and Morals of Apprentices Act, limited the daily hours of labor for apprentices in textile mills to twelve, prohibited night employment, and prescribed that "every such apprentice shall be instructed, in some part of each working day, for the first four years of his or her apprenticeship, in the usual hours of work, in reading, writing, and arithmetic, to be paid for by the master or mistress of such apprentice." The law was evaded by refusing "to apprentice" the child workers; but it was a beginning in the area where there was a precedent, established by the old apprenticeship legislation.

Further advance was blocked for thirty years. One cause was the fear that the education of the masses would lead to a wave of radicalism, such as had engulfed France. The Napoleonic Wars occupied the attention and emotions of the country until 1815 and after Waterloo came the conservative reaction led by the Duke of Wellington. The Lords rejected Whitbread's Parochial Schools Bill of 1807, which would have provided two years of free education for every child. In the year after the final defeat of Napoleon, as frequently happens after a war, the people were for a moment willing to give serious attention to education. Henry Brougham

was in 1816 appointed chairman of the committee to investigate the condition of the poor in London. Witnesses testified that they lived in a "very dreadful state" from overcrowding and lack of sanitation, that large masses of children received no education, and that those who attended school received little benefit. But in spite of this evidence, Brougham's education bill of 1820, a tax measure, had to be withdrawn.

Not until 1833, one year after the passage of the Reform Bill which abolished the "rotten borough" representation and extended the franchise to the middle classes, did Parliament vote any money for schools, namely, twenty thousand pounds for building schoolhouses, to be used by the two monitorial societies, the National, and the British and Foreign. It was a time of serious financial difficulty, but in the same year England purchased and freed all slaves in the British Dominions at a cost of two million pounds. The education grant became an annual one and the yearly amount was from time to time increased, to thirty thousand pounds in 1839, to one hundred thousand in 1846, and to eight hundred thousand pounds in 1860. The year 1839 was also memorable because it was then that a Committee of Council was created which was to function as a department of education. The chief function of the Committee of Council was to allocate the government money grants. In 1846 the further policy was adopted of appointing school inspectors upon whose reports the allocation of funds could be based. It will readily be seen that the powers of the Committee were expanding. From allocating money to inspecting schools is itself a big step. Matthew Arnold was for most of his life one of Her Majesty's Inspectors of Schools.

The first secretary of the Committee of Council was a man whom we have named, James Kay-Shuttleworth. He was educated as a physician at Edinburgh and his fellow student, Charles Darwin, later recorded admiring regard for his ability and particularly for his skill as a public speaker. As an administrator he was discreet and self-sacrificing but energetic and progressive. Matthew Arnold, who had every opportunity to know the basic facts, called him the founder of the system of public education in England. Kay-Shuttleworth, like Horace Mann, began as soon as possible to make provisions for the education of teachers. The first effective appropriation for training colleges was made in 1841, five thousand pounds to the Borough Road College, named above, and smaller amounts to two other new schools.

Following the Chartist agitation and the increasing strength of the labor movement, the demand for a local tax for schools kept growing, but the opposition of the friends of the voluntary system and of those who would have to pay heavily was too strong. Meanwhile, without a clear plan or national decision, the school system kept forming itself. English democracy

has always laid great store by fact-finding and publishing, believing that the facts when known will convince the public and lead to well-informed action. Thus in 1858 the first national education commission was appointed to study the "state of popular education in England, and to consider what measures, if any, are required for the extension of sound and cheap elementary instruction to all classes of the people." It was called the Newcastle Commission, for the Duke of Newcastle who was its honorary chairman, and made its report in 1861.

The Newcastle Commission reported on all sorts of elementary schools, dame, infant, Sunday, evening, and day schools, and both private and public schools in any of these classes. Public in this case means conducted by a society or board and not managed by an owner for his personal support or profit. The Commission recognized the public day schools as the most important provision for the education of the poor; and they recognized too that the quality of any school depends most upon the capacity and education of the teacher. They found also that schools of some sort, often of a very bad sort, existed everywhere and that there were very few children in 1860 who did not attend school at some time in their lives. On this point the Commission was probably much too optimistic, since it was shown ten years later (1870) that in Liverpool one-fourth of the children attended no schools at all. Less than half the children were in schools that were receiving the government grants. The Commission report also showed that in England and Wales, thirty-two training colleges for teachers were in operation.

The Commission did not recommend any organic change in the system which was growing up; but one matter which might seem a detail had striking consequences. This was the scheme of "payment by results," which provided that the government grants were to be allocated to schools on the basis not only of average daily attendance but also on the basis of the number of pupils who annually passed a state examination in reading, writing, and arithmetic. The system of payment by results was apparently first suggested, long before, by Dr. Andrew Bell and used in his monitorial schools. The plan was, of course, an unfortunate experiment. It placed a premium upon the bald teaching of facts by cramming and drilling for examinations and it tended to restrict the curriculum essentially to reading, writing, and arithmetic, for no grants could be earned for work in geography, history, or drawing, however excellent, because these subjects were not included in the examinations. Kay-Shuttleworth argued against the adoption of "payment by results," declaring that it would be "ever remembered with shame." So it has been, although it remained in use in English schools until the middle eighties when it was gradually abandoned; it was completely abolished in 1890. A suggestion by Archbishop Ireland

that "payment by results" should be introduced into American schools was brilliantly answered by B. A. Hinsdale (*Studies in Education*, Chicago, 1896).

The next great step, and the greatest yet taken, came in 1870 with the passage of the Elementary Education Act of 1870. This law is also known as the Forster Act after the author W. E. Forster. The Reform Act of 1832 had extended the vote to the middle classes, but it still left the numerous working class and the poor generally without the ballot. A new Reform Act passed in 1867 extended the suffrage further and formed the foundation of a long campaign which led to manhood and, after World War I, to adult suffrage. The return of the Liberal Party in 1868 was the opportunity for a great deal of social legislation: laws on child labor, on hours of labor, on sanitation, and on accident prevention, an act permitting trade unions to hold property, and another introducing the secret ballot. It was the influence of the workingmen when they were given representation in Parliament that formed the balance of power between the dissenters and churchmen and enabled the Forster Act to pass.

The central provision of this act was that it established school districts and elective school boards for the purpose of providing and supervising elementary schools in all places where the existing supply was insufficient. The school boards had the power to levy taxes for schools in their districts. The government continued to aid private schools; but it now could and did establish its own public schools for the education of the "schoolless multitude," of children, as Matthew Arnold called them, whom the private schools had not reached. Acts of 1876 and 1880 introduced compulsory attendance; and in 1891, elementary education was made free. By that time, where elementary education was not supplied by voluntary bodies, it was public, free, and supported by local tax and government grant. Everywhere attendance was compulsory. The Committee of Council was not an efficient agency, and in 1899 Parliament created a national Board of Education with a President as the executive officer directly responsible to Parliament. The Bryce Commission of 1895 reported in favor of public secondary schools closely connected with the elementary schools, and this recommendation was embodied in the Balfour Act of 1902.

By 1910 there were nearly twelve hundred secondary schools supported by local tax or government grant or both, in addition to the old grammar school and Public School foundations. The Fisher Act of 1918 attempted to weld into one system all the public educational agencies, all the elementary, secondary, technical, and higher schools under public control. And in 1944, in the midst of another war, England was again engaged in further democratizing its educational provisions. To this we shall return immediately.

6. PRESENT PUPILS AND SCHOOLS

About two-thirds of England's children attend public or "provided" elementary schools and the rest attend the "nonprovided" or private and voluntary schools, which are conducted by the Church of England, the Catholic church, or other smaller denominational bodies. Many of the nonprovided schools are located in rural England and have smaller average enrollments than the public schools. Religious instruction is sectarian in the nonprovided schools, while, in accordance with the Cowper-Temple clause of 1870, in the provided schools only, nonsectarian Scripture knowledge, in which "no religious catechism or religious formulary which is distinctive of any particular denomination," may be taught. Bible reading without comment, and prayers, are permitted.

The infant schools for children between the ages of five and seven are separately organized. Above these ages the elementary school proper, with seven or eight classes, may enroll either boys or girls or both. It is usually organized into the junior, intermediate, and senior grades, but some schools have only one or two of these departments. Most of the children do not continue full-time attendance beyond the elementary period, which ends at fourteen. This age is the present end of compulsory attendance in most schools. For those who leave school at fourteen, there are many advanced classes which give either vocational or general instruction in the evening. There are also many opportunities for adult education.

England has made two recent attempts to reconstruct its educational system. The Fisher Act of 1918 contemplated raising the compulsory age to fifteen but, for financial reasons, it was not possible to bring it into operation. The same fate overtook the provision for compulsory continuation schooling. In the years between the two World Wars the question of improved education for England was under continuous study. This is best shown by the issue of the Hadow Reports on *The Education of the Adolescent* (1926), on *The Primary School* (1931), and on *Infant and Nursery Schools* (1933) and the Spens Report on *Secondary Education* (1939). The student of English educational history cannot afford to neglect these Reports which are valuable not only for their recommendations but also for their historical sections written by Robert Fitzgibbon Young, the learned and judicious secretary of the Consultative Committee which conducted the extended hearings upon which the Reports were based.

A new Education Act, skillfully piloted through Parliament by R. A. Butler, who was President of the Board of Education, was passed on August 3, 1944, and came into partial effect in April 1945. This Act is a code which supersedes all previous laws and recasts the national system. The former President of the Board becomes the Minister of Education

with effective power to promote, control, and direct education. All education of children aged eleven and over is now to be considered secondary education; and it becomes the duty of the government and the local education authorities to make secondary education available to all children without fees. The Act continues the fine tradition of cooperation between the local and the central authorities which has distinguished educational administration in England; it reenacts compulsory continuation schooling between ages fifteen and eighteen; and it raises the compulsory attendance to age fifteen and later to sixteen at the demand of the Minister. These measures and the provision of new school buildings to replace those which were destroyed in the war would be so expensive and the shortage of teachers is so acute that the raising of the compulsory attendance age has again been postponed. We shall, in the following paragraphs, deal with the actual schools rather than with those which will result when the Act of 1944 comes into full operation.

The elementary schools all teach religious knowledge, English, physical education and hygiene, arithmetic which receives one-fifth or one-sixth of the total time and attention, nature study and geography, history which receives little emphasis, writing, drawing, and practical subjects such as manual or domestic instruction. Each school makes its own schedule which, however, has to meet the regulations of the Ministry of Education, and each school is given considerable freedom in arranging its courses and determining its methods of teaching. There is little attempt to use the schools for nationalist indoctrination.

In the mixed elementary schools there is some differentiation in the curriculum for boys and that for girls. Boys, for example, are given swimming lessons and handwork and girls are taught needlework. In a typical school the distribution of time for the different subjects might be about as shown in the table below. The figures represent the number of forty-five-minute periods per week that are given to each of the subjects. Each subject is taught in every year throughout the course; the pupils have approximately thirty-six or thirty-seven exercises each week, but many of these do not require any outside preparation.

*Subjects and Approximate Number of Periods per Week
in a Mixed Elementary School*

RELIGIOUS INSTRUCTION	4	OBSERVATION AND NATURE STUDY	2
ARITHMETIC	5	NEEDLEWORK	3
ENGLISH	4	DRAWING	2
READING	3	PHYSICAL EDUCATION AND HYGIENE	2
POETRY	2	HANDWORK	1
GEOGRAPHY	3	MUSIC	1
HISTORY	2	DANCING	1
RECREATION	1	OPTIONAL	1

Above the elementary schools there are the central schools, which give advanced elementary and prevocational courses and are public and free, and a great variety of public and private secondary schools. The secondary schools give a general liberal education and usually charge fees, but to receive state aid they must provide a certain number of free places, usually one-third of the enrollment. Entrance to the central or secondary schools is obtained through the free place examinations which are taken at the age of eleven. The examinations cover English and arithmetic, and frequently, history and geography. Intelligence tests are sometimes also used and consideration is given to the pupil's school record. Because there are not enough free places to accommodate all the children who might qualify, the examinations are made rigorous and are, in fact, not qualifying but competitive. It is said that only ten per cent of the children can pass the free place examination. Those who do not pass with the highest averages may be admitted to a central school.

The central schools provide a somewhat lower and easier form of education than the secondary schools which prepare for the university. They are called by this name because they serve a number of the surrounding elementary schools. Because the best of the senior pupils from the elementary schools go into the secondary schools, the work of these schools is often lowered in quality. This may be a weakness of the system. And another problem arises from the variety of schools and curricula which makes transfer and promotion from school to school more difficult. The central schools offer general, industrial, commercial, domestic, and fine arts courses. These are four years in length and some pupils are permitted to remain an additional year. It is often possible to enter a secondary or technical school from a central school.

The reader will have surmised that in England the terms elementary and secondary are not rigidly defined. There are many schools for girls and some for boys which provide work from the primary grades to the door of the university. Most secondary schools admit pupils between the ages of nine and twelve and retain them to sixteen or eighteen. From twelve to eighteen is regarded as the secondary period; and to be eligible for government grants, a secondary school must have a stated proportion of its pupils in continuous attendance between twelve and sixteen. But the Board of Education merely says that a secondary school is one in which most of the work is secondary, which from several points of view is not a model definition. Usually English secondary schools, like those on the continent and unlike the American high school, offer only academic and not activity and vocational curricula, but this does not apply to the experimental schools. There are a few activity courses in most schools.

The English secondary schools may be grouped into four classes. Estab-

lished under the Education Act of 1902, there are many public schools that are maintained by counties and county-boroughs. These are required to teach the English language and literature and at least one foreign language unless there is special provision to give adequate linguistic and literary training by means of English only. Most schools teach two foreign languages and, in that case, one must be Latin unless permission is given to substitute a second modern language for Latin. These provisions indicate the flexibility of the control over secondary curricula. The other required subjects in the public schools are geography, history, mathematics, science, drawing, and physical, manual, and musical instruction. In girls' schools domestic subjects must be taught. Some schools teach Greek, German, French, Spanish, or Italian. In subject matter and in the proportion of adolescents attending them, the English public secondary schools are about in the condition of the American secondary schools in 1890. They do not offer the extensive technical, industrial, and commercial courses which are sometimes found in the larger American high schools. But one must remember that of the subjects just named only the commercial course is almost universally offered in the American high school.

The second class of English secondary schools is composed of local day schools managed by a private board like an American academy. Many of these are well-known old schools with a classical curriculum; but since they enroll local pupils they are somewhat responsive to community demands. These schools charge fees.

The Great Public Schools comprise the third class. Only nine such schools were originally recognized but the definition has been broadened and new ones have been founded so that now the *Public Schools Handbook* includes about two hundred, many of them nineteenth-century foundations. These are expensive schools for the richer and upper classes. They are managed by private boards.

There is, finally, a wide variety of wholly private secondary schools that are conducted by the owners. Some of these are conservative, but included in this class are some of an experimental or "progressive" type. A once-famous school of this kind was established early in the nineteenth century by Thomas Wright Hill at Birmingham but it did not become permanent. Abbotsholme School was founded by Cecil Reddie in 1889 and it has inspired numerous other schools with a modern activity curriculum. Bedales is a coeducational school established in 1893 by J. H. Badley, who had been an Abbotsholme teacher. Abbotsholme has other daughters in France and Germany. Schools of this type usually have a flexible curriculum and emphasize the physical, manual, intellectual, moral, and aesthetic development of their pupils. Like other secondary schools, they prepare pupils for the university.

The variety of the English schools is the result of freedom and of individual and group planning; but there is not now and there never has been a consistent national plan. English education like English life and history is the result of compromises and changes introduced as new classes of people came into the programs. It will not be possible, in our limited space, to give a precise outline of a system which contains so many irregularities, but I. L. Kandel's *Comparative Education* (Boston, Houghton Mifflin Company, 1933) from which also much of the above information is taken, shows the general relations of the schools.

English educational freedom is even embodied in the legislation which has consistently sought to protect existing institutions and to preserve existing interests. Schools have grown up or have been provided by law to take advantage of opportunities and local needs or to fill gaps in the arrangements previously made. It was on this basis that the Education Department and the Department of Science and Art were created in the nineteenth century. Their functions were at the turn of the first century assigned to a single body. Thus, England in 1899 created a central authority for education, the Board of Education. Its power consisted in the fact that it distributed and allotted the public money to the schools; but it did not control the schools through rigid and general regulations, as is done in France and Germany. Instead, it called upon the local authorities to submit their programs and to make reports and it also inspected the grant-receiving schools. There are general regulations on buildings, class size, the number of days when the schools must be in session, and other physical matters, but the prescriptions on what should be taught and how it should be taught are flexible and are couched in terms of suggestions and minimal essentials merely. The Board of Education and the schools have generally cooperated and exchanged views on the best ways of using the available resources. This ideal plan permits a maximum of local planning and adjustment to local need.

7. THE SPREAD OF ENGLISH INFLUENCE TO AMERICA

English education has influenced the schools of foreign countries and of the British Colonies and the Dominions. The views and practice of Rousseau and the philanthropinists were shaped by the doctrines of John Locke. The English cooperative movement played a part in the development of the Folk High Schools of the Scandinavian countries. The Hazelwood School of the Hills was copied in Sweden; and Cecil Reddie's Abbotsholme became a model for both French and German school reformers. But the British dominions feel that influence most strongly. In Canada, Australia, and South Africa and in the British Colonies, one finds modified

extensions of the English system. A comparison of these shows family likenesses which stem from the education of the mother country.

Similar resemblances stemming from common centers of origin can be traced in other parts of the world. Latin-American systems are similar to each other and different from the English because the Latin-American countries borrowed the outlines of their civilization from Spain and Portugal. The Scandinavian countries are so closely united by language and religion, and by the similarity of their political and economic systems and ideals that their school systems also have developed along similar lines. And, to give only one more example, it is an easy guess that schools in the countries within the Russian bloc will take on many of the characteristics of the education of the dominant nation. Modern education is carried forward on national lines as the last three chapters have shown. Since we are next to take up American education it will be appropriate to close this chapter with a brief survey of English influence upon American education. This is especially pertinent since we were colonies of the British empire in its early stages.

In Virginia and Massachusetts, the early schools were established by Englishmen and followed the pattern of education which prevailed in England in the seventeenth and eighteenth centuries. The English language became the language of the American people, government, and schools, and has so remained. The early text-books were written in England and many of the teachers for two centuries came from England. The Latin grammar school was imported from England. The English S.P.G. was active in the colonies, especially in those in which the Anglican church was established. The Thoughts of John Locke were widely read; and they impressed even so original a man as Benjamin Franklin when he came to promote the establishment of the academy. In other ways, also, the American academy was affected by English writings, and by English experience with a similar institution; but it did not entirely follow its English model or Franklin's idea. It became, as we shall say later, the first important educational invention to be developed in America.

Other English influences were of a local or temporary character. The monitorial system of Lancaster and the English variety of Pestalozzian object-teaching have already been mentioned. The mechanics institutes developed by George Birkbeck about 1820 and the scheme promoted by Albert Mansbridge, early in the present century, for the education of organized labor were both copied in the United States but never attained the success which they had in England. The nursery school is an even more recent importation. It remains to be seen whether it will become a general feature of the American system.

The American colleges also were at first modelled upon the colleges of England. Harvard College was founded by graduates of Emmanuel College,

Cambridge, and was named for one of them, John Harvard. Even the town in which the new college was opened was named for the city on the Cam where its promoters had studied. William and Mary College, Yale, Princeton, King's College, in New York, and others followed. But the wide dispersion of our people did not permit the association of these colleges into a university of the Cambridge or Oxford type. Religious diversity also divided them. Some were Anglican, others Congregational, Presbyterian, Baptist, or Dutch Reformed. Because there was no overarching university to hold them together and direct their ways they each gradually developed into independent universities. One important feature of the English college we have retained, namely, the idea that there should be a period of broad, liberal education interposed between the secondary school and the specialized study and investigation of the professional and graduate schools. The continent of Europe and Latin-America do not have any institution resembling the American or English college.

The examples that we have already given illustrate a general truth about the diffusion of culture and its institutions. It is this. Unless the conditions in the borrowing country are very similar to those in the lending country, the culture and institutions which are imported either fail to take root or are quickly and often radically modified. One or both of these results followed in most of the cases named above. Even our language is no longer quite the language of England. The Latin grammar school, although imported, was not suited to American conditions. The academy never closely followed its English prototype. And so with most of the other importations.

American democracy was one of the conditions that tended to limit the introduction of English schools and educational practices or that transformed them when they were brought over. By democracy we here mean merely the greater equality in the social status of the American people, the absence of an aristocracy and of great landed estates and the extension of the suffrage. Even in England the aristocracy was not a caste but there were ruling classes. Her Prime Ministers were not like Jackson or Lincoln, drawn from the self-educated "common" people. Her educational leaders were drawn from the Public Schools and the old universities. The open frontier, and the scattered population were other American conditions that tended to transform borrowed institutions. Our rapidly expanding economy made necessary the extension of elementary and some secondary education to the general public. This need in its turn promoted the education of girls who in many cases became teachers in our fast growing school systems. The separation of church and state and the development of schools from which sectarian instruction was banned, eliminated from American public education much of the religious dissension that long hampered the development of public education in England. These American conditions will be considered further in the following chapters. Those chapters will show

that, although we borrowed from England and many other countries, the American people have developed their own system of education.

The development of national education in England makes an especially interesting historical study because conditions hindered it which, abstractly considered, should have promoted it. English individualism, a restricted view of the functions of government, political democracy which could not use compulsion or royal fiat, religious freedom, the growth of a class of wealthy and influential dissenters, all tended to delay nationalization. We must add to this that the English, like other Western peoples, had to overcome a tradition of family and church education, and that the partial effectiveness of philanthropic efforts often made public education seem less necessary.

The monitorial schools of Bell and Lancaster played an important part in demonstrating that universal education would not be too expensive. They also developed methods of administering large schools, of grading the classes, and of organizing and teaching the subject matter. They convinced many that teaching was a skilled, if not a professional, occupation for which some preparation and training were necessary. They formed an important stage in the movement for universal education.

The early nineteenth century was notable for a fruitful interchange of educational ideas with the continent. While the monitorial system was being introduced into France and other countries, the English and the Scotch schoolmasters borrowed and spread the infant school, the teacher-training school, and a series of Pestalozzian practices and ideas. The English variety of object lessons was widely spread in the United States.

After three failures at widely separated intervals, in the time of King Alfred, of Wycliffe, and of the Commonwealth, the English government in 1833 adopted the promotion of education as a public policy. Parliament granted a sum of money for building schoolhouses to be used by the two monitorial societies; and it shortly instituted the inspection of private schools, and established training colleges for teachers. The Newcastle Commission drew the map locating the evils of English elementary education in 1861 and added another to a chapter of errors, "payment by results." The Act of 1870 established local elective school boards and assigned them the power to levy taxes for schools in their districts. Compulsory attendance followed a decade later. The elementary curriculum has been greatly expanded, health services, vocational, and technical courses and schools have been developed, and an extensive system of partially free secondary schools has been created. The Act of 1944 was passed in the midst of war to unify, extend, and modernize the comprehensive system of national education which England has developed.

QUESTIONS

1. Why was it difficult for the English to agree upon a national system of education?
2. Compare and contrast the philosophies of philanthropic and of public education, as these were developed and held in England.

3. Do you agree with the statement in the text that the charity schools were useful; and why or why not? Would the period to which this question is taken to refer influence your answer?
4. If Napoleon's plan to invade England had succeeded, would public education have developed as rapidly as it did in Prussia?
5. Why did the monitorial schools develop in England rather than in Prussia, Switzerland, or France?
6. Examine Lancaster's *Improvements in Education* and estimate its significance in its own time and country.
7. Compare the methods and stages of educational progress in England and France.
8. Why was "payment by results" a mistake? Give other examples in which public money payments had, or have, to be "earned."
9. Private secondary schools have occupied a strong position in English education. Why has this been true? Has it been advantageous to England or to the English people?
10. Examine C. Reddic's *Abbotsholme*. How do you account for the fact that this early "modern progressive" school arose in an educationally conservative country like England? Why may England be called educationally conservative?

FOR FURTHER READING AND STUDY

The literature on the Great Public Schools must be omitted here, but this note will apprise the student of its existence. There are special volumes which deal with individual schools and also more general treatments. The histories of the English universities must likewise be passed over. The following list is intended to amplify the history of national, popular education in England. Particular mention should be made of the extended series of Board of Education reports, including the *Special Reports on Educational Subjects* which began in 1897. Recent noteworthy publications include the Hadow Reports on *The Education of the Adolescent* (1926), on *The Primary Schools* (1931), and on *Infant and Nursery Schools* (1933), and the Spens Report (1939). The Year-Books of the International Institute of Teachers College, Columbia University, have many articles on English education.

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16 AMERICAN BEGINNINGS

THE EARLY COLONIAL PERIOD WAS AN ERA IN WHICH THE colonists copied European schools as closely as American conditions permitted. We sometimes call it the period of transplautation. But even so the schools were gradually adapted to the needs and circumstances of the frontier. The break with tradition which resulted from the migration, and the mingling of many peoples, gave occasion for innovation. The first great innovation was the development of the American academy. In this chapter, we shall treat of education in the British-American colonies from the settlements down to the Revolution.

Thirteen colonies, extending from New Hampshire to Georgia, were founded in this period of one hundred and eighty years. By hard work a living was obtained from the soil, the sea, and the forests. In savagely fought wars, the Indians were driven inland and the strip of English civilization along the Atlantic was gradually widened. By 1750, in Pennsylvania and Virginia where the strip was widest, the settlements reached up into the Alleghenies and were spilling over the crest. The French and Indian War (1755-1763) assured the frontiersmen that the Ohio Valley would be English and not French. By 1770, the people of the thirteen colonies numbered two and a quarter millions and, from natural increase and continued immigration, they grew so rapidly that, as Burke said: "While we spend our time in deliberations on the mode of governing two millions, we shall find that we have millions more to govern." This growing body of people became ever more restive under English control, especially after the French menace was removed; and in 1776 they declared their independence and their intention to build up a separate American civilization.

1. THE EARLY SETTLEMENTS

The period when the British formed their early American settlements was a time of low wages, unemployment, and social unrest. The famine of

1595 was the beginning of a long depression. Many people were obliged to find new ways of making a living and some of these turned toward foreign lands. The destruction of the Spanish Armada in 1588 had established the sea power of England, and the East India Company was founded in 1600. Others looked westward to the little known lands across the Atlantic. How little the English knew of America, even after the voyages of Hawkins and Drake and after Raleigh's attempted settlement, is shown by the account of George Weymouth who visited the coast of Maine in mid-summer of 1605 and thereupon reported a climate suitable for tropical fruits. Much of the difficulty that the early English settlers encountered came from mistaken notions about the resources and conditions of the country.

The band of one hundred and five colonists who landed on the banks of the James River in 1607 did not find the gold and immediate wealth for which they had hoped. Starvation and disease carried off half of them in six months and would have destroyed the rest but for supplies and replacements supplemented by greater attention to agriculture. A few years later, when the Puritans came into control of the company which promoted the settlement, they sent over a new governor with instructions to hold an election for members of a representative assembly in Virginia. This first American legislature met in the church in Jamestown in 1619. The new government lasted only five years, for Virginia was made a royal province in 1624.

The Virginia settlements became permanent through the discovery of a profitable crop suited to the climate, tobacco. The tobacco plant rapidly exhausted the soil so that new land had to be constantly brought under cultivation. The plantation system which developed demanded a supply of cheap, unskilled labor. This demand was met by transporting debtors and criminals from English jails, children from English poorhouses, and persons kidnaped in London alleys. English paupers came as redemptioners and paid for their passage by a term, usually four years, of labor in the tobacco fields. Some of the redemptioners were skilled mechanics, bookkeepers, or schoolmasters. The first shipboard of slaves from Africa was brought over in 1619, the year of the first legislative assembly. Thus there were two classes in Virginia, one consisting of the planters, the clergy, and a few other professional people and the other the working class, many of them employed at forced labor as slaves or redemptioners. There was no large middle class.

The population of Virginia was widely scattered on the plantations fronting on the rivers. There were no cities, few villages, roads, industries, or stores. Cooperation and the assembling of people was difficult. The center of the planter's life was still in London where he disposed of his crops

and purchased his clothes, furnishings, and implements. The planters' families were frequently refined and their homes were furnished with books, musical instruments, and English furniture. The children were educated by the parish clergy or in schools maintained on the plantations. There were a few Latin grammar schools and some of the boys in wealthy families were sent to English schools. For the poor, neighborhood or "old field" schools were established, in which itinerant teachers taught upon occasion. The system of apprenticeship provided opportunity for vocational training. Many children received little or no schooling.

The first settlements in northern Virginia, or New England as it came to be called, were made at Plymouth in 1620 and at Boston in 1630. In the latter year the great emigration of Puritans began, for civil war was imminent in England. In that single year more than a thousand and within ten years not less than twenty thousand colonists came to Massachusetts. No such peaceful mass migration had taken place in historic times. The colonists settled in compact villages, and the New England town, that is township, became the center of their political life. There was no large-scale agriculture and no plantation system. Diversified farming which demanded varied knowledge, skill, and business ability became the rule. And since New England could not maintain her growing population by agriculture, she turned to industry and fishing. Cod and herring from the waters between Marblehead and Newfoundland were exchanged for the products of the West Indies and Europe. Fishing boats and seagoing ships were needed. There were great forests of timber and the resourceful colonists readily learned to build their own vessels. Within twenty years of the settlement of Boston, more than a thousand boats were engaged in the fishing industry. Masts for the royal navy were frequently exported to England. Thousands of skilled workmen were employed in shipbuilding and in navigation. The New England system of farming and industry was built upon the skilled and semiskilled labor of a dominant middle class.

Economically, New England was democratic. By industry and intelligence it was usually possible for the poor to become landowners, artisans, shipowners, or merchants. Scores of trades developed. The wealthy class were often alarmed because of the high wages which enabled artisans to own houses and gardens and which threatened to break down the social classes. There were few slaves, but the slave trade was profitable and many slave ships were owned by New Englanders. Business and the town meetings provided training for democracy.

Political democracy developed very gradually. In the beginning, society in New England was neither democratic nor tolerant. But Puritanism was a leavening influence, a transition movement, tending to dissolve the medieval system of class and status and to produce free and equal individu-

als. A dozen men held all the powers of government in Massachusetts in 1630. The next year one hundred and sixteen others were admitted to the company. The leaven was working; but the freemen were still only a small part of the population. Thomas Hooker, who founded Connecticut, declared that "to leave power in the hands of rulers who are not responsible to the people is to invite tyranny." The numbers of the freemen were increased and a form of representative government was worked out; but it was in the annual town meetings and by serving on town committees that the people received the most useful political education.

Tolerance also developed slowly. The Puritans had chosen a post of danger in the wilderness, instead of their quiet homes in a civilized country, to establish a "godly commonwealth," free from error; and now they were dismayed to find error both springing up within and assailing them from without, threatening ruin to their "holy experiment." They tried to defend by mistaken means that for which they had sacrificed home and native land. Their executioner burned heretical books; they censored the output of their printing press which, established in 1639, remained for a generation the only one in America; and they did worse in driving Roger Williams into the wintry forests and in banishing Ann Hutchinson. But the persistency of the Quakers, whose opposition to a regular clergy made them especially obnoxious to a theocracy, led to the strongest measures. Four were hung.

The theocracy could not continue on this road. Sympathy for the victims, a growing sense that ideas can not be destroyed by force, and a growing fear of interference from England put an end to the killings. Charles II did interfere; and the "glorious revolution" of 1688 further strengthened the principle of toleration throughout the English world.

The most advanced position was taken by Roger Williams. In 1631 he became pastor at Salem and ascended the pulpit to denounce the union of church and state and to declare that the civil authorities had no right to punish violations of religious commandments, Sabbath-breaking for example. This was the position later taken by John Locke. Williams founded his colony in Rhode Island on civil equality, the separation of church and state, and complete religious freedom; and these principles became foundation stones of government and public education in the United States. Close approaches to religious liberty were also made in the colonies of Maryland and Pennsylvania.

2. COLONIAL MELTING POT

The settlers of the Middle Colonies, with their confused intermingling of languages, faiths, and nationalities, were much more diverse than those

to the north or the south of them. New Amsterdam, before the English conquest in 1664, was a mere village, yet in its streets more than a dozen languages were heard. The Swedish and Quaker settlements on either side of the Delaware attracted men from the British Isles and almost every country of western Europe. The Dutch, after winning their struggle for independence from Spain and after the decline of Spanish sea power, turned even more vigorously than before to commercial and maritime pursuits. They became enterprising traders rather than colonizers. Because they found religious toleration and reasonable economic opportunity at home, they did not emigrate in large numbers. New Netherland was governed not by the mother country and not in the interest of the colonists but by the Dutch West India Company for the financial enrichment of its members. The fall of New Netherland and its occupation by the English seems to have been welcomed by most of the inhabitants. In the last quarter of the seventeenth century the colony, favored by its excellent location and by the development of representative government, began the rapid growth which early in the nineteenth century made New York the largest American city. During the eighteenth century, however, Philadelphia, not New York, was the largest city in British America.

The active settlement of the Middle Colonies to the south of New York was held back by Dutch claims and Dutch control of that region until 1664. After that the vacant spaces on the Atlantic coast between the southern and the northern colonies were rapidly filled up. The great increase in population which took place in the two decades following 1690 was due in considerable part to the new immigration into Pennsylvania, New Jersey, and other colonies and in part to the high birth rate in colonial families everywhere.

The people who were coming into the Delaware Valley in those years were of many stocks and faiths. Small settlements of Swedish Luthcrans and Dutch Calvinists had been there long before. The Dutch social reformer Ploekhoy established a small colony far south on Delaware Bay in 1663. Puritans, escaping from the unfriendly England of Charles II, English and Welsh Quakers, and Welshmen who were not Quakers to the number of several thousand, had come before William Penn arrived in the ship *Welcome* in 1682. Some of the Welsh moved out into the country and Welsh names like Brecknock and Caernarvon are found far from Philadelphia in Pennsylvania. A small number of Huguenots came in the same year (1683) as did Francis Daniel Pastorius and the Mennonites who founded Germantown. Pastorius was a scholar, university bred, and a Pietist. He was for several years a teacher of a Friends' school in Philadelphia and later a teacher and town officer of Germantown. The statement is

sometimes made that he was the most learned man of his time in America, not excepting Cotton Mather. Among the half-dozen languages of which he had a command was the English, and he prepared a little primer, *The True Reading, Spelling, and Writing of English*, which was printed by William Bradford of New York in 1697. German and Swiss and some Dutch Mennonites came in large numbers into the counties of southeastern Pennsylvania. Twenty families of Dunkards, now the Church of the Brethren, arrived in 1719 and others followed. Influenced by John Huss, Caspar Schwenkfeld, a nobleman of Sillesia, founded the sect which bears his name. In the first half of the eighteenth century, some Schwenkfelders settled in eastern Pennsylvania where they much later founded the Perkiomen School. The Moravians, who were the direct disciples of Huss and who had settled in the new colony of Georgia, were aided by George Whitefield in moving to Pennsylvania where they settled at Nazareth and Bethlehem about 1740. They have been noted for their work as missionaries to the Indians, for their activity as founders and teachers of excellent schools, and for their devotion to music, especially the music of Bach. The Scotch-Irish, grievously oppressed in Ulster and cordially hating their English oppressors, began to arrive sometime before the German and Bohemian groups and settled in the mountain valleys of Pennsylvania and Virginia. They were mainly Presbyterians and they played an important part in the Revolution and in the politics and education of America. Catholics, both from Germany and from Ireland, also migrated to the Middle Colonies; and Maryland was for a time a haven for English Catholics. Episcopalians came in large numbers into New York and Pennsylvania. Many of these groups developed their own church schools so that the Middle Colonies became a parochial school region.

3. EDUCATIONAL TRANSPLANTATION

Many motives served to send people across the Atlantic. Redemptioners came because they were out of work. Ship captains could sell the time of a healthy and especially of a skilled immigrant for more than the regular passenger fare, and even found it profitable to delay transportation, holding emigrants at embarkation ports until their savings were used up, when they could be taken as redemptioners. Some were transported from English jails where they had been confined for debt, for political offences, and for many worse crimes. Others came voluntarily to escape political or economic or domestic involvement, some for travel or adventure, some to Christianize the Indians. Many came to escape religious persecution, especially during the horrors of the Thirty Years War; others, such as the Puritans, the Quakers, the Moravians, and Roger Williams, intended to found an ideal church. As in other conditions of human life, economic motives were

usually also involved: to find gold or work at high wages and to return; to engage in trade or to develop a new country and to make a fortune; but perhaps the most frequent reason for the great migration, which to the majority meant a complete severing of all ties with the old country, was a keen desire to found quiet and comfortable homes under easier conditions than Europe could offer.

None came for educational advantages for these were not to be found in a wilderness, except that in a negative sense the new world might help them to escape some of the disadvantages of the traditional, and at that time decadent, schools of the old world. But apparently they had no idea of the shortcomings of the schools of the seventeenth century. It is a striking fact that none of the colonists were dissatisfied with the educational institutions or with the opportunities which would have been theirs in those institutions if they had remained in Europe. They were seriously dissatisfied with their religious, political, and economic opportunities, but for the schools of their mother countries they expressed the sincerest admiration by imitating them and attempting to transplant them to the new soil.

With some exceptions they were satisfied with a moderate degree of education for their children. Some of the planters of the South, some of the official class, and those who looked forward to professional careers for their sons demanded secondary and higher schooling. But the vast majority of American settlers were less ambitious. Women and the mass of unskilled laborers were at best taught little more than reading and writing. The slaves expected no education and received none. The Puritans, the Presbyterians, the Quakers, the German sects, and all those aroused by the Reformation to a living sense of religious issues demanded literacy and a knowledge of the catechism and Bible. Some, but not all of these, also required an educated ministry. The small businessmen and skilled artisans and even the farmers needed some arithmetic, practical measurement and calculation, and elementary training in drawing up legal documents. The land surveyor was an important functionary in every community in the seventeenth century; and a knowledge of navigation had to be acquired by ship captains and of handwriting and bookkeeping by merchants. The general effect of frontier life was to reduce both the demand and the supply of schools. By 1700 or soon after, the lands nearest to the coast and to the larger rivers were pretty well occupied and the Indians less menacing. The peace of Utrecht in 1713 coincided with the conquest of the Tuscarawas by the Carolinas. Soon the strong Scotch-Irish immigration was to begin. As a result of all these factors, a broad and spreading band of frontier settlements began to develop to the westward. In seventeenth-century America the real frontiersman, like the unskilled laborer and most women, was likely to be illiterate.

4. THE TRANSPLANTED EDUCATIONAL INSTITUTIONS

Four main types of educational endeavor characterized the seventeenth century: apprenticeship to the manual vocations; reading and religious instruction directed by churches and missionary societies, or obtained in dame schools, field schools, or otherwise; the formal secondary and higher education of the Latin schools and colleges, although until near the end of the period Harvard was the only college; and practical schooling in mathematics and its applications to accounting, navigation, and surveying together with supplementary work in English. Only the first three of these were transplanted. The last was in the main a native development. Every one of these four types of education was found in each of the colonial regions, New England, the Middle Colonies, and the South. The cultural similarity of all the early colonies, in spite of their economic differences, has not been sufficiently noticed and has even been denied; but it is a true statement that the educational differences between the different social classes and the different regions of any one colony were greater than those between the different colonies.

5. APPRENTICESHIP

In the laws and the practices of apprenticeship training, English legislation and precedent were directly followed. The English laws on apprenticeship education were from the first closely related to poor relief. The first such act was voted in the reign of Henry VIII, and the series of enactments came to its climax in the code of 1601 just as the colonizing trend was beginning. The English guilds were declining. The state, therefore, took over some of the most necessary of their activities, including the relief of the poor and the vocational education of poor children. The laws in England provided for the compulsory apprenticeship of such children at public expense and made it the obligation of the local government to supply the necessary materials and facilities. Those laws were copied by the colonies. Apprenticeship was one of the most widespread forms of education in colonial America and all the colonies passed laws to facilitate it.

The word "apprentice" comes from an old French verb that even in the Latin from which it was derived meant "to learn." An apprentice is one who is bound to a master to learn a trade. The legal instrument, which specified the duties and privileges of the master and the apprentice, was called an indenture. The indentures frequently contained a clause that required the master to provide opportunities for a small amount of schooling, sometimes in an evening school. In such cases we have a combination

of two of the four types named above, trade training and elementary literary education.

One of the early acts of the Virginia legislature ordered that the English "statute for artificers and workmen" should be published in the colony. A law of 1646 further provided for a workhouse school to teach spinning and knitting to young children. A third Virginia act in 1661 required the justices of the peace to apprentice poor children. Various other acts dealt with the same subject and with the literary and religious education of poor and orphan children. The repeated reference to orphans in the laws demands a word of explanation. All youths and minors whose parents remained in England, as well as those whose parents were no longer living and all illegitimate children, were by law classified as orphans, and for the education of these the state attempted to provide. Others were voluntarily apprenticed by their parents if they were to learn a trade. The apprenticeship system was most widespread in the northern colonies but it was found in Virginia, as indicated, and in the other southern colonies also. The system was frequently abused. Masters sometimes exploited their apprentices, employing them at common labor without teaching them the specified trade. In such cases the laws provided redress through fines or by reassignment to more responsible masters. The laws of New York introduced a new element by providing that the completion of an apprenticeship should entail the right of full citizenship.

The first general education law in New England, that of Massachusetts in 1642, was in part an apprenticeship law. The law was passed to remedy "the great neglect in many parents and masters in training up their children in learning and labor and other employments which may be profitable to the commonwealth." A later clause in the law explains that by "learning" was meant "ability to read and understand the principles of religion and the capital laws of the country." Any parents or masters who neglected to teach these abilities together with a trade were subject to a fine; and the selectmen of the town were commanded to remove children or apprentices from the custody of neglectful parents or masters and to commit them to the care of others who would perform their duty under the law. In this "first New England school law," as it is sometimes called, schools are not mentioned. It was not a school law but a law on the proper upbringing of children among the poor and the lower middle classes. We should notice particularly that it required training in "learning and labor," joining apprenticeship to reading and religion as many indentures also did. Court records in the several colonies show that the apprenticeship laws were sometimes enforced but not how constantly or how strictly this was done.

The power of legislation in colonial times was in the hands of the rich

and well-to-do. The apprenticeship laws were therefore an example of one class legislating for another class, the rich for the poor, partly for the benefit and the control of the poor, and also partly for the benefit and relief of the rich. These motives may be best exhibited in a summary of the arguments for such laws and for the apprenticeship system. Apprenticeship, it was held, tended to reduce the burden of poor relief and to prevent pauperism and crime; to avoid probable distress; to prepare capable workmen for employers; to teach the elements of learning and religion in addition to a trade; and to aid in maintaining the traditional, or as they would have said the natural, order of society. Obviously apprenticeship and the legislation related to it were not wholly, perhaps not even chiefly, intended to benefit the apprentice and his social class.

Apprenticeship declined in importance in the colonial period and even more rapidly afterward. The abundance of land, the mobility and freedom of the people, the willingness of the frontiersman to do with makeshift implements and furnishings, and the immigration of mechanics and craftsmen who had been trained in Europe all worked against the apprenticeship system. The heaviest blow was delivered by the factory in the nineteenth century, but the system had been declining in colonial days.

6. SCHOOLS FOR READING AND RELIGIOUS INSTRUCTION

Everywhere in the colonies the common people were seriously concerned that children should be taught reading and the principles of religion; but frequently their interest in education did not go much further. Everywhere, education was still accepted as one of the functions of the church although it was felt that other agencies, such as private bodies or the state, might properly support or at least supplement the church in the performance of this duty. The Virginia statute of 1631, which required the clergy to instruct the youth in the catechism and the Book of Common Prayer, also laid an obligation on the parents and all those who had the charge of children: that they should send them to the church to receive this instruction. Many of the Virginia churches established parish schools and a few maintained charity schools. In the eighteenth century the Church of England missionary body which was called the Society for the Propagation of the Gospel in Foreign Parts established charity schools, imported orthodox schoolmasters from England, opened libraries, and provided wholly or in part for the support of these institutions.

The interest that parents took in the education of their children is proved by the wills of the period. Many testators provided not alone for the education of their own but also for the children of others. There were Virginia wills bequeathing funds for the education of "six poor children";

or for the schooling of the poor children of the testator's county; or giving five hundred pounds in trust for the salaries of schoolmasters; and providing for the maintenance of a free school in the County of Lancaster. Wills and letters also show that indentured servants were employed in teaching. From the very end of the colonial period we have the diary of John Harrower, an indentured servant from the islands far north of Scotland, who served as teacher in the Daingerfield family near Fredericksburg. The last entry of the diary, made after the news of the Battle of Lexington had reached Virginia, speaks not of teaching but of getting a supply of lead, perhaps for bullets, from the roof of one of the buildings on the estate.

Families with means frequently employed a tutor or established a family school in the mansion house or in a separate building erected for the purpose. It would not be possible to distinguish clearly between the tutorial plan and the family-school plan. The one merges into the other, but in the latter there was often a separate building close by the residence, especially erected for school purposes, and the children of the plantation and those from neighboring plantations were taught together. Graduates of northern colleges or Scotch schoolmasters were sometimes employed. There is an excellent account of such a family school, as it was at the end of the colonial period, in the diary of Philip Fithian. Fithian was a graduate of Princeton and taught for a year in the Carter family in eastern Virginia. The boys of the school followed an English and classical course, including some Greek, but the girls were given merely an English education. Fithian described not the school alone but also the social life of the period and region.

Another nonchurch type of school was the neighborhood or, as it was usually called, the "old field" school. The historian Beverly speaks (1705) of the habit of the people of Virginia of joining together to form little schools for their children; and Jones in *The Present State of Virginia* (1724) says that "in most parishes there are schools, little houses being built on purpose where English and writing are taught." The latter of these passages almost certainly and the former probably refer to the old field school. In these buildings, usually located on some plot of abandoned or waste land, whence the name, itinerant teachers "kept school" when they were able to gather a sufficient flock of pupils. Such teachers were good, bad, or indifferent in ability and character. Their reputation in history is certainly not high but some historians think injustice has been done them, pointing out that almost every advertisement for a teacher demands one of sober and correct life and good character. But even this evidence is really ambiguous. The unanimity with which such qualities were demanded may actually mean that they were hard to find. We know that

some of these itinerant teachers were learned and reputable men and that some were not, and this seems to be all that we do know.

In Pennsylvania, and the Middle Colonies generally, educational conditions were not so different as they have been painted from those of Virginia and the South. There was no established church, there were many sects, and the people lived in more compact settlements. They engaged in diversified farming and in the towns in a great variety of occupations. The middle class of free and independent workmen, farmers, and small businessmen formed the bulk of the population. In this region also the locally organized and democratic neighborhood school was a familiar and frequent institution; and it was most frequent where, as in Pennsylvania, the settlers were divided into many sects and where the number of any one sect was too small for a church school. In Philadelphia and other large towns, in the southeastern part of the colony, and wherever whole communities were composed of a single denomination there were church schools. Elsewhere the neighborhood schools predominated and served the children of all faiths. They were commonest in the region toward the Susquehanna and beyond in the valleys of the Cumberland and Juniata rivers and in the region across the Alleghenies. There a common school, established by the people themselves, religious in its tone but undenominational in its teaching, grew up on the frontier and formed the basis for the public school when the time arrived. Wickersham has estimated that in 1834, when Pennsylvania voted to adopt the public school system, there must have been at least four thousand schoolhouses in the state built by the contributions of the people themselves. They were not closely modeled upon any previous institution but were the simple response of farmers and frontiersmen meeting a need with the resources at hand. The fact that the Scotch-Irish settled in the central and western parts of the state aided the movement because, although interested in education, they did not usually favor church schools.

From the historical accounts of several county superintendents in Pennsylvania, the historian Wickersham has presented descriptions of the way in which these neighborhood schools came into being. We select the one prepared by the superintendent of Delaware County because it is in the southeastern corner of the state where, if anywhere, the so-called parochial system would be expected. This is what he wrote:

"The reader will understand that in the times thus far noticed, there was no system of public instruction, but the education of children was almost wholly a matter of private concern. The family school was succeeded by the neighborhood school. The establishment of such a school was usually effected by the voluntary and united action of the people of the neighborhood who desired it. Certain persons were made trustees, who had charge

of the school property, and who mostly appointed the teacher and had the general management of the schools. 'The teachers were paid by their patrons at the rate of two or three dollars a quarter for each child, and sometimes something additional for wood and ink.' Such a plan had many defects. The school was not free although the cost was low. Where money was scarce the fee was often paid in corn or pelts. The school terms were short, usually three months, and there was no assurance that even this minimum of opportunity would be available every year. Some of the teachers were without sufficient learning or proper habits, but the usual quality of the instruction was probably as good as that of the district schools in New England. The schools were established and maintained by the voluntary efforts of the people and were in that sense democratic; and although not public they were almost as well adapted as the district schools to provide a foundation for the free, public, and universal education of the nineteenth century.

The Dutch of New Amsterdam had a school in 1642 when Jan Stevenson began a term of service as master of the parish school of the Dutch Reformed Church. They may have had one as early as 1638, taught by Adam Roelantsen, but a long controversy has made it clear that there is no real evidence for a school in 1633, as had been held. 'The early schools in New Netherland were conducted under a system of joint support and control by both state and church, which had long been in use in Holland and was now transplanted to America. The support which in the old country would have been provided by the government actually came from its American representative, the Dutch West India Company, whose directors bought the schoolbooks and drew up the rules for the schoolmaster's daily life and work. The church supplied the schoolmaster, making sure of his orthodoxy and literary competence. The school taught the four R's, namely, reading, writing, arithmetic, and religion, and the teacher served as assistant to the minister. He frequently led the singing in church or read the service and sometimes he officiated as sexton and bell ringer. The same plan was followed in all the Dutch villages. When the English came into permanent control of New York, the school had to be supported by the church but it was the state that authorized the church to collect school rates. These, although levied and collected by the church, were gathered by authority of the civil law. This principle, inherited from Dutch rule, made easier the establishment of public schools in the State of New York in 1795.

New York was also the scene of vigorous missionary efforts by the Church of England through its Society for the Propagation of the Gospel in Foreign Parts. Trinity Church was the first Anglican congregation to be organized in New York City (1697) and it supported the school of

a Mr. Huddleston. A few years later the S.P.G. began to support Mr. Huddleston and required him, after 1710, to teach forty-four children free. As a result nearly all the paying pupils were withdrawn by their parents, leaving only the charity pupils; and then Trinity Church again established a separate parish school. Most of the schools of the S.P.G. were charity schools; and, since they were missionary enterprises, the school-master had to be an orthodox member of the Church of England. These schools were established in the villages about New York and in the Hudson and Mohawk valleys. The usual subjects were the four R's, and the methods were formal and wholly memoriter. Church schools were maintained by many denominations throughout the colonial period in New York.

In Pennsylvania the Friends made an effort to set up an educational system as the Dutch had done in New York. The deep interest which they felt in the practical and religious education of children is shown by the frequent appeals and resolves of their meetings, by the doctrines promulgated by their leaders, and still better by the schools which they established. The London yearly meeting sent appeals to all Friends to care for the education of children, to assist young Friends to prepare themselves as teachers, and to attend particularly to the education of the poor. Local monthly meetings regularly appointed overseers to carry out these directions. Many Friends both in England and among the early settlers were educated men. It is true that the Friends laid more emphasis upon religion than upon learning and, because they did not demand education as a qualification for preaching, it was often thought that they depreciated education. This is an error, but being mainly middle class working and business people they stressed practical and religious teaching rather than classical education. It has, however, never been easy to find anywhere an illiterate Friend.

William Penn, one of the truly great men of our colonial period, was a democrat in politics and a pious but liberal mystic in religion. In education, although schooled in the classics and the Church Fathers, he was a realist. Any people is free, he held, whatever the form of their government, if they are governed by laws of their own framing. But we are not content that government shall be merely free. We demand also, he said, that it shall be wise and good; and that it may be so we need not only good laws but also good men. If we would preserve our government after it is established, he continued, we must teach the people to love it and this must be done by educating the youth who will conduct the government when we are gone. The young while they are still children are the wards of the commonwealth, which has the high duty of providing a sound education for them. The realism of Penn also appears in a letter to his wife advising her to spare no cost in the education of their own children for "by such

parsimony all is lost that is saved"; but he requests that they should be taught useful knowledge such as applied mathematics, shipbuilding, and agriculture.

Holding such principles, Penn in his Frame of Government (1682) ordained that the governor and council should establish and direct all "public schools"; provided for a committee on manners, education, and the arts; and decreed that children from the age of twelve should be taught useful trades. Article thirty-five of Penn's Frame guaranteed in the strongest terms the rights of conscience and the separation of church and state. The first Assembly of Pennsylvania (1681) ordered that the laws of the province should be taught in the schools. The second Assembly passed a statute very similar in its provisions to the "learning and labor" law of 1642 in Massachusetts. The fine imposed upon parents or masters for failure to teach reading, religion, and a trade was five pounds. Numerous cases under this law appear in the court records of early Pennsylvania showing that the statute was needed. Universal education was the aim both in Massachusetts in 1642 and in Pennsylvania in 1683 but it was not attained in either colony. A school was established by the Council of Philadelphia in 1683 when Enoch Flower was employed to teach reading, writing, and bookkeeping and to provide board and lodging for pupils from a distance. Fees were charged and the rate was set by the Council. A Friends' Public School, now the William Penn Charter School, was opened in 1689 and chartered in 1697. It was a classical institution like the Boston Latin School (1635) and the School of the Dutch Reformed Church of New York (1638), now called the Collegiate School. These three seventeenth-century schools are still in operation. Included in the plan of the Penn Charter School was a system of charity schools which for almost two centuries taught the elements of reading, writing, and religion to the poor children of Philadelphia. They were abandoned when the public schools took their place.

While the first Frame of Government contained liberal provisions on education, the second, called the Charter of Privileges, which Penn granted in 1701, omitted all of these. The Charter remained in force for three-quarters of a century, until the Revolution, and during that time church, charity, and neighborhood schools held the field in elementary education in Pennsylvania. There was no effort to develop state activity. The Friends had established sixty or seventy meeting houses before the Revolution, and near many of them there were schoolhouses. The Germans of the Lutheran and Reformed churches carried over from Europe a well-developed parish school tradition and practice and were very industrious in teaching their children after the most severe frontier difficulties had been overcome. One of the Lutheran leaders in church and school was Henry M. Muhlenberg

who came from A. H. Francke's schools at Halle. A Pennsylvania college has been named for him. The Episcopalians and the one or two thousand Catholics who came to the province before the Revolution established parochial schools. The Moravians at Nazareth and Bethlehem established important schools and together with the Friends were among the early pioneers in the education of girls in America. The Presbyterians, who more than others favored universal education under public auspices, often established private schools in Colonial times. The Catholics, Episcopalians, and Lutherans favored parochial schools. On the other hand, the Baptists, the Seventh Day Adventists, the Methodists, who were only beginning to grow rapidly at the Revolution, the Mennonites, the Amish, the Dunkards or Brethren, and the Schwenkfelders, while they built some schoolhouses or taught classes in their churches, were more likely to cooperate in building and maintaining neighborhood schools, or to teach their children in the family.

Towards the middle of the eighteenth century, Germans were migrating into Pennsylvania in such large numbers that their English neighbors began to think of them as a serious political problem. Many of the German immigrants were poor and, under frontier conditions, until the land was cleared, crops planted, and permanent buildings erected, education must frequently have been neglected. The English, unable to understand their language and ignorant of their past history, looked upon them with distrust. They even feared that, in the imminent war with France, the Germans might support the enemy. It was in such a time that Rev. Michael Schlatter of the German Reformed Church came to America (1746). After a five-year preaching mission among the Germans on the frontiers of Pennsylvania, Maryland, and Virginia, he sent to Europe a highly unfavorable report of American religious and educational conditions. This was printed in Holland, translated into English, and widely read. The Episcopal provost of the College of Philadelphia, Dr. William Smith, wrote a long letter confirming and commending Schlatter's report although he had no first-hand knowledge of the facts. Dr. Smith proposed that an effort should be made to Anglicize the Germans, teaching them the language, customs, and laws of the English colonies and colonists. This was, of course, an early Americanization proposal. He argued from the sound principle that without education it is impossible to preserve a free government; but he had little understanding of these Swiss and South-German political and religious refugees. He professed to believe that they were in danger of "degenerating into a state little better than that of wood-born savages!" As a result of these and other appeals, some noblemen and wealthy gentry of England organized a Society for Propagating Christian Knowledge among the Germans in America. This title itself and still

more the offer of charity aroused opposition and the Germans thought they also saw political and sectarian purposes in the program. Nevertheless, about fifteen schools were established in Reading, York, Easton, Lancaster, and other places and at one time they had a total attendance of seven hundred and fifty pupils; but they never became popular and by 1763 this early attempt at Americanization had ended in failure because the leaders did not take the trouble to understand those whom they attempted to teach.

New England developed the public school more easily and sooner than other parts of the country. There were several reasons for this such as the compact settlements, the prevalence of skilled and business occupations, the town meetings and town control of local affairs, Puritan and Calvinistic interest in education, and the close cooperation between state and church. Where church and state were as closely joined as they were in New England, it was a comparatively simple matter to secure state support of the church's educational program. This was what Luther had proposed in the early years of the Reformation; and in some of the German states, and in Holland and elsewhere, forms of church and state cooperation which looked toward public education had already been developed.

The Massachusetts law of 1642 attempted to institute compulsory education but not compulsory attendance. And again in 1647 in her second general law on education Massachusetts voted, not compulsory attendance but the compulsory establishment of schools, ordering every town, that is, township, of fifty households to establish an elementary school and every town of one hundred households a secondary school as well. One teacher qualified to teach the secondary subjects, Latin and Greek, could satisfy both requirements since the second might well include the first. A town was fined five pounds for failure to comply. This was too small an amount because, at a time when teachers received a greater amount for a year's work, recalcitrant towns found it cheaper to pay the fine than to maintain a school. The fine of five pounds was increased to twenty pounds in the course of the century.

Throughout the colonies schools were supported in the most varied ways, such as by income from lands or other endowments, local taxes, rates, appropriations, contributions, tuition fees, lotteries, liquor license fees, and bank and theater taxes. Combinations of several of these were often used at the same time, as was the case in Virginia and Massachusetts. For three centuries a great historical experiment in the means of school support has been carried on in colony and state. The first problem was to eliminate tuition fees and rates, to make the schools free of cost to parents, in order that education might cease to be a special privilege and

become a public service, open to all. The schools were made tuition-free about the time of the Civil War, although Massachusetts took this step in 1827, Pennsylvania in 1834, and Vermont in 1850. The second part of the problem was to find an equitable, dependable, and sufficiently flexible source or combination of sources of funds to maintain, in good times and bad, the education of a whole people. This also was accomplished, but only gradually and at a later time.

Cities and towns generally secured free schools before the country districts. The Pennsylvania free-school law of 1834 was anticipated by more than a decade in some cities; and some of the large cities of New York had provided free schools a full generation before the state enacted the free-school law of 1867. Not every gain by the free-school interests was permanently held. Connecticut passed a law in 1700 requiring each town to levy an annual tax of two mills for the support of the schools; and in 1750 that state established a state common school fund. From the proceeds of the sale of the land of the Western Reserve a large fund was built up, and in 1821 the two-mill tax was repealed and the schools were wholly supported from the income of the state fund. The people, however, lost interest in schools for which they were not required to pay, and the schools themselves rapidly declined in efficiency. School costs increased and the schools of neighboring states, especially those of New York, forged ahead. For a time Connecticut employed cheap teachers and maintained schools only until the proceeds of the fund were exhausted. Rural school terms in the state during this period were often as short as three months. Many districts returned to the rate bill to eke out the meager support provided by the fund. Henry Barnard, Noah Porter, and several of the governors attempted to rouse the people from their slumber. In 1856 a one-mill tax for schools was passed but the rate bill was not abolished. The Connecticut public schools were not again made free until 1868. This passage from the history of school support in Connecticut illustrates several principles: that a cause such as the support of free schools by public tax may be won, and lost, and only by strenuous and long-continued effort again regained; that the people tend to lose interest in schools which are provided for them and for which they do not themselves help to provide; and that fixed endowments, permanent endowments as we incorrectly call them, do not form a dependable support for growing institutions since the funds may be lost, the rate of yield may decline, and costs are very likely to increase.

A further significant development in the town schools of New England was the separate school board, usually called the school committee. First the town meeting itself, then a special committee appointed to carry out a particular task, such as the employment of a schoolmaster, thirdly, an annual standing committee on schools appointed by the town meeting,

and finally an elected school board, made mandatory in Massachusetts by the law of 1789—these were the steps by which the evolution took place.

The schools of New England, unfortunately, did not keep pace with this administrative progress. Many factors tended to lower the tone and hamper the conduct of the schools. The district school and the dame school came to take the place of the town school; and as a result, elementary education in the eighteenth century became less effective than it had been in the seventeenth. This is shown in the town records and other writings of the two periods. The Indian wars had been destructive and costly and the money spent on arms could not at the same time be used for schools. In King Philip's War half of the ninety New England towns were involved and many villages were destroyed. After the war a large debt remained to be paid. With the removal of the Indian danger, the colonists set up separate farmhouses instead of rural villages and moved farther and farther into the wilderness where the school could not easily follow them. On the frontier, also, a literary education was less needed and therefore less desired than in the eastern towns where shopkeepers, mechanics, ship captains, and those of other skilled vocations demanded arithmetic, bookkeeping, and literary skills. Before the end of the seventeenth century the Puritan church was divided into liberal and conservative branches; and a good deal of the religious fervor which had supported education at first had been dissipated. Toleration, admirable though it is, does not favor unity and in New England it gave entrance to many sects. All these changes led to a decline of education on the frontiers of all the colonies. In New England they produced the district school, which is first cousin to the neighborhood school of colonies farther west and south.

The separation of the people into small and isolated settlements led to the separation of the township into small neighborhood districts for school purposes and the establishment of the district system. The word district is ambiguous when used in education without qualifying explanation. We may speak of city districts, supervisory districts, and other types, but when we speak of "the district system" we refer to a one-teacher school that is controlled by a board which administers this one school only. This obviously is to reduce the school to its lowest terms, to bring it as close as possible to the people, to make it, in that sense, as democratic as possible. The district system was peculiarly adapted to the frontier which created it. It is historically important because it moved from New England westward with the advancing frontier so that almost all regions of our country were at some time under the district system. It is historically important because once firmly established, supported by the sentiments of the neighborhood, it became a formidable obstacle to educational progress. The shortcomings of the district school, as compared with the consolidated

or city school, were such as the short terms, the low salaries, and the lack of uniformity between neighboring schools, of supervision, of equipment, and of sufficient enrollment for efficient group work.

7 SECONDARY AND COLLEGE EDUCATION

Our early secondary schools were Latin grammar schools which prepared boys for college and which were closely connected with the colleges. Some Latin grammar schools were public, others were private. Most of them were independent but some were merely the preparatory departments of colleges. The curriculum was always classical, but the role of the Greek studies had shrunk so greatly that only the simplest elements of the language were taught. The instruction in Latin was more extensive and consisted of drill in grammar and composition and the reading of Cicero and other authors. Rhetoric, declamation, and ancient history were sometimes added.

Many of the American Latin schools were local day schools which enrolled the children of the community, but there were some boarding schools. Obviously the boarding school, a little world in itself which shuts out the great world beyond its walls, erects a greater barrier between its pupils and those who are excluded than the day school. The day school is not so far removed from everyday interests; and after school hours the children of the whole neighborhood mingle freely with each other. The typical colonial grammar school was a small day school in a middle class community; and it frequently taught the common branches to one group and Latin to another and smaller group who intended to go to college. To cite just one example: the school of Roxbury, Massachusetts, at the end of the colonial period had eighty-five pupils, and only nine of these were studying Latin. The rest were enrolled in the common branches. Only in the largest towns were there many Latin pupils. In small places the master was compelled to teach reading and arithmetic to ten boys before he had the chance to introduce a single one into the mysteries of the Latin tongue. The aristocracy of the Latin grammar school of which we sometimes read was a good deal of a myth; but educationally it was not well adapted to the frontier. Before the end of the colonial period a new institution, the academy, began to take its place because it was a more flexible institution and better adapted to a new country. Very few of the colonial Latin schools remain, but among these are the Boston and the Roxbury Latin Schools and the William Penn Charter School.

As early as 1621 a free school called the East India School was planned at Charles City, Virginia, but perhaps it was never opened because the whole settlement was wiped out in the following year by an Indian mas-

sacre. The Symms school, endowed by a will of 1634, and the Eaton school were not in constant operation, but there is a slender thread of continuity leading to the present Symms-Eaton Academy, a public school at Hampton in which the two old foundations have been merged. Several other private and endowed schools offered classical education in Virginia. The school at Norfolk was a public school controlled by the town council. Thomas Jefferson prepared for William and Mary and James Madison for Princeton in private grammar schools, and such schools became numerous in the later colonial period when Scotch schoolmasters migrated to Virginia. One of these was Donald Robertson who maintained a prosperous school in the period from the French and Indian War to the Revolution. The College of William and Mary, named for the sovereigns brought in by the "glorious revolution," was the only colonial college south of Philadelphia; but this section rapidly developed new colleges after 1776.

Several efforts were made by the legislatures of North Carolina and of Maryland to encourage the founding of grammar schools but conditions were very similar to those in Virginia. As Governor Calvert of Maryland said, "the remoteness of the habitation of one person from another" was the great obstacle. The government of North Carolina aided several grammar schools with grants of land and funds; and Maryland provided for a school at Annapolis, which later developed into St. John's College, and also a county system of Latin schools, each county school system to be governed by a board of trustees. Only a few of the twelve schools projected by the latter act were successful.

The Penn Charter School, already mentioned, was the first permanent Latin school in Pennsylvania. Several elementary charity schools were connected with it; and the central school itself was in two divisions: a Latin school and an English and mathematical school. The former was strictly classical throughout the colonial period and long after; but the latter was a practical school which taught a range of subjects, arithmetic, bookkeeping, trigonometry, navigation, surveying, and others. The French and German languages were taught from 1742. This early school differed from Franklin's Academy in that it was conducted by a religious society and was not connected with a college; but otherwise the two were very similar. Eastern Pennsylvania had many private grammar schools in the eighteenth century. Several of these, which were designed to prepare young men for the ministry, were established by Presbyterians and resembled the Puritan academies of England. They taught the classics, which received the main emphasis, but also included mathematics, some of the sciences, and theology. There were grammar schools conducted by several of the churches, and there were a few neighborhood grammar schools managed by groups of interested citizens. Most of these were classical but from the Penn Charter school and some of

the schools of the Presbyterians we gather a hint of an important truth, that even in colonial times grammar schools in the Middle Colonies tended to introduce modern subjects. This statement applies to the schools of New York and New Jersey as well as those of Pennsylvania. Life was less ecclesiastical west and south of New England and medical and scientific interests were more widely diffused.

The settlers of Massachusetts began to set up grammar schools in the first years of the Bay Colony. Because conditions were more favorable than in the other colonies, their success was much greater. Seven or eight grammar schools in the towns of Boston (1635), Roxbury, Ipswich, Dorchester, Cambridge, and others were begun within a few years of the settlement; and the law requiring every town of a hundred families to maintain a school where boys could prepare for college was passed in 1647. Connecticut enacted a similar law in 1650, although a few grammar schools had been established earlier. Two of these were located at New Haven (1641) and Hartford (1642). The bequest of Edward Hopkins was applied in aid of these two schools and of another one at Hadley. The Hopkins Grammar School of New Haven is still in operation. In most of New England the zeal for grammar school education declined in the late seventeenth and eighteenth centuries. According to the Massachusetts court records, some towns which had been favorable to education neglected their schools and deliberately incurred the penalty of the law of 1647 because it was cheaper to pay the fine than to pay the master. Many grammar schools also became mere elementary schools because there were no advanced pupils.

8. ACADEMIES IN THE MAKING

The schools in America made numerous adjustments to the special conditions of the new country but in the eighteenth century they effected an invention, a distinctly new institution, which developed into the American academy. Among the adjustments which have been mentioned were public control, the district system, the neighborhood schools and, contrary to the English practice of grouping colleges in universities, the distribution of our colleges in widely separated population centers. The new invention was the incipient academy, often called "the private school in the city," or "the advertised school." With the increase in population, new business and construction needs arose, and the gap between what the grammar schools taught and what practical life demanded became constantly wider. Enterprising teachers sought to satisfy these growing needs where they were most insistent, namely, in the towns of Boston, Newport, New York, Philadelphia, and Charleston. Such teachers opened evening and day

schools, offered practical subjects, and advertised their programs in the papers. Evening elementary schools had appeared in New Amsterdam before 1650, but these practical evening or day schools on the secondary level did not become very numerous until 1725. Philadelphia alone had one hundred and sixty teachers of such advertised schools between 1722 and the end of the Revolutionary War. City directories tell a similar story. In the period following the Revolution, New York City had one private teacher for every ninety families. About one-fourth of these teachers were women. Many of the advertised schools for girls were well stocked with ornamental branches but those for boys were more likely to offer mathematics and its applications. The schools usually followed the quarter-plan; and being without endowments, if they were to prosper they had to meet the needs and wants of the pupils.

To show the emphasis upon mathematics and the variety of the branches and topics in that field, we give a list made by combining the offerings of several of the schools. Each of the subjects named below was taught or at least advertised by one or more private schools in eighteenth-century America. The list is as follows: algebra, geometry, mensuration, logarithms, plane and spherical trigonometry, fluxions (also called calculus), the quadrant, navigation, astronomy, surveying, dialing, gauging, geography, maps, use of the globes, bookkeeping; and also engineering subjects such as leveling, hydraulics, hydrostatics, pneumatics, optics, perspective, architecture, fortification, and gunnery. Bookkeeping was advertised to be taught according to "the Italian method of double entry." The modern languages were not omitted. There were teachers of French, German, Spanish, and other subjects which the grammar schools and colleges of that time ignored almost entirely. These were new schools meeting practical needs.

9. THE EARLIEST ACADEMIES

The foundations of the American academy were laid by the private schools which we have described. The academy is distinguished from these by the fact that its control was vested in a board of trustees which often operated under a charter from the state. In the present account both the chartered secondary schools with a realist curriculum and those without a state charter will be included under the term academy. It was a more flexible and variable institution than the English academy. It frequently admitted girls and sometimes was open to girls only. In the latter case the term female seminary was often used. The English academy was a boys' school and usually taught theology to ministerial students, while in America the academy frequently had no church connections. Many American academies prepared teachers for the common schools and indeed these institutions

became the models for both the normal schools and the public high schools. The Americanism of the academy is suggested by its development during the movement for independence and its general acceptance during our first national period. The prerevolutionary period belonged to the Latin grammar school; and soon after the Civil War the high school became dominant; but during the intervening century from 1770 to 1870 our needs for secondary education were served mainly by the academy.

The chief defects of the academies as institutions in a democracy are that they were not free and were not controlled by a public board. Many tended to become expensive and exclusive boarding schools, but in the beginning they furnished educational opportunity to the boys and girls from the farms and villages. They were not free, but in the thousands of country academies the costs were low. To maintain themselves these schools had to teach what the public demanded at a cost they could afford. The curricula were broad and flexible and included many courses in mathematics, the sciences, English, and history. Logic, ethics, geography, and civics were offered. The great subject fields were divided into short courses. The English branches might include reading, elocution, grammar, composition, rhetoric, word study, declamation, debating, literature, and literary history. Mathematics and the sciences were likewise divided into short courses. As many as one hundred and fifty distinct courses were offered although most of these were subdivisions of a few large fields. Like the "advertised schools" from which they stemmed, the academies taught many subjects which led to engineering or business employment; but the idea of a general, liberal education was also present. Gradually, as the weaker academies were displaced by the public high school, those which survived tended to become college preparatory schools.

School equipment had not yet become extensive in the age of the academy. Libraries and laboratories were lacking in most cases, although there were usually little-used cabinets of minerals and apparatus. Most of the courses were taught from textbooks and the spread of the academy must have greatly encouraged the writers of the flood of schoolbooks which came from the press after 1800. Many of the academies were small, one- or two-teacher schools, and textbook recitation was the usual method, although field work and simple experiments were not entirely unknown. It should be remembered that the boys and girls of that rural age had more direct contact with nature and more knowledge of her ways than the city-bred youth of today; but, in itself, academy education was both bookish and discursive, even superficial.

Secondary schools were sometimes called academies early in the eighteenth century if not before. There was a South Carolina academy in 1712; the "log college" of Pennsylvania, opened in 1726 by Reverend William

Tennent, was not only sometimes given the name but it had the characteristics of the English dissenting academies. As early as 1743, Franklin "drew up a proposal for establishing an academy" in Philadelphia. Six years later he returned to the project, secured the help of a number of active supporters, wrote a pamphlet entitled, "Proposals relating to the Education of Youth in Pennsylvania," and started a subscription for funds. A board of trustees was agreed upon, and in November 1750 they ordered "that the Academy be opened on the seventh day of January next," and it was opened on that day. Although not incorporated until 1753, it may have been the first chartered academy in America. It was Franklin's intention to found a wholly nonsectarian school and one in which modern subjects, especially English, history, and mathematics, were to have the chief places; but he was disappointed in both objectives, as it was inevitable that he should be. Of the twenty-four trustees about two-thirds were Episcopalians. And after the College of Philadelphia was established in 1755, an active clergyman of the same church, Reverend William Smith, became provost. Neither the original academy charter nor the new charter of *The Trustees of the College, Academy, and Charitable School of Philadelphia in the Province of Pennsylvania* mentioned the religious affiliations of the trustees or staff and the nonsectarian character of the school was, in the legal sense, preserved; but at any rate some very prominent Episcopalians felt that the school leaned to their side. The academy, like the old Penn Charter School, was divided into a classical and an English school and the chief teacher of the classical division became the administrative head of both classical and English schools with the title of Rector and a salary which was twice that of the English master. Perhaps these were the best terms that even the diplomatic Franklin could get from the board for his cherished English school; but it is not surprising that the Philadelphia Academy laid more stress upon the classics than upon the modern subjects, especially when we consider its close affiliation with the college. It was in the public high school that Franklin's educational ideal finally came to prevail. As the high school developed many academies were closed, others were turned over to the public school boards, and the rest became a minor but not unimportant agency in the whole field of American secondary education.

10. THE COLONIAL COLLEGES

Four colleges were established in the New England colonies: Harvard, Yale, Dartmouth, and Brown; four in the Middle Colonies: the College of New Jersey, now Princeton, King's College, now Columbia, the College of Philadelphia, which grew out of Franklin's Academy, now the University

of Pennsylvania, and Queen's College, now Rutgers; and one in the southern colonies, William and Mary, at Williamsburg, in Virginia. For fifty years after the settlements, Harvard was the only American college and it was long a small and mediocre institution. It began to grow in numbers and importance in the eighteenth century and especially after the Revolution. Something of its early scope and purpose can be gathered from the accompanying diagram. Evidently its early curriculum was composed of three historical strata of materials taken respectively from the Middle Ages, the Renaissance, and the Reformation. The diagram also reveals the significant fact that six of the nine colonial colleges were founded within the last thirty years of the colonial period.

The colonial colleges were regarded as societies of ministers and prospective ministers. The only profession for which they specifically prepared was the clerical. Many destined for other callings, however, attended and only about forty per cent of the graduates of the colleges became ministers. Only the College of Philadelphia was to any great degree independent of church affiliation; but the head of that school throughout the colonial period was a clergyman and was accused of teaching Episcopalian and Tory doctrines. Besides the clergy, lawyers and physicians became intellectual leaders in the years before the Revolution. No colonial college maintained a law school; but the College of Philadelphia, located in the city which had become the greatest medical center of America, established a medical school in 1765.

The plantation system of Virginia and the South was much less favorable to school development than the compact settlement, skilled industry, and town government of New England. Both of these sections were settled by Englishmen; but the Middle Colonies had a mixed population of many languages and faiths. As a result of these differences, three types of school administration were developed. The South depended largely upon private education, New England upon a simple form of semi-public schools under the legal and extra-legal control of both church and town, and the Middle Colonies largely upon parochial and neighborhood activity. The South, therefore, followed the ancient classical custom, the Middle Colonies the medieval practice, while New England adopted the rising idea of state action. Examples of all these types of school administration existed in Europe and, in fact, in the British Isles. Religious toleration and freedom and political democracy, as they slowly developed, gave increasing support to the growing public school idea.

The schools themselves, like the administration, were transplanted. There were four main types of schools and educational effort, namely, apprenticeship, the elementary school of the four R's, the secondary and collegiate scheme which was carried on by the Latin schools and colleges together, and practical schooling to prepare youth for simple engineering and business occupations. A noteworthy achievement of the period was the development of the American academy. Each of the main types of institutions was found in all sections.

In retrospect, the colonies are seen to present almost every variety of educational systems and institutions, all competing for social acceptance and survival; parochial, sectarian missionary, private, neighborhood, town, district, and still other elementary schools; medieval, humanist, and realist secondary schools; schools and apprenticeship for vocational preparation; and Old World colleges in the towns; and to maintain all these educational endeavors, various kinds of administrative devices, numerous forms of financial support, and several ways of securing public attention and interest were employed. It was as though some educational Francis Bacon had set up a giant experiment to determine which types of schools and of school management could best survive and prosper in a wilderness developing into the United States of America. One of the most conclusive phases of this experiment is that which had to do with modes of support, but, although much has been learned from this and the other phases of the whole great adventure, it is important to notice that the "experiment" has not ended. It is still in process and the evaluation is continuing.

In the colonial period, then, the foundations were laid for our public school systems, for our numerous types of private schools, and for the public policy which permits private education to continue and to compete with public. Only the foundations were laid upon which the next period began to build.

QUESTIONS

1. Educational differences between colonial New England and the South are supposed to have been due to different physical, economic, political, and religious influences in the two sections. What effects can be assigned to each kind of influence?
2. How did the diversity of religious faiths affect early education in Pennsylvania?
3. American education is justly proud of its success in helping to "Americanize" foreign immigrants. Why is Pennsylvania Dutch, an Anglicized German dialect, still widely used in eastern Pennsylvania?
4. Civil control of schools, support by public taxation, and nonsectarian (or, perhaps, secular) teaching may be considered as cornerstones of public education. How much progress toward achieving each of these was made in colonial days? What would you choose for the fourth cornerstone? Would it be compulsory attendance, or some other feature, and why?
5. Evaluate the apprenticeship laws and practice in the colonies.
6. What were the advantages and defects under colonial conditions of the neighborhood schools?
7. Using Wickersham's *History of Education in Pennsylvania*, consider the statement that William Penn was a realist.
8. Why did American education tend to become less rather than more effective in the latter seventeenth century?
9. Why was it easier for New England than for other parts of the country to approximate public education?
10. Why did the district system develop and why was it found unsatisfactory? What is a district school?

11. Compare educational opportunity about 1770 in Philadelphia with that open in the country (a) to a boy and (b) to a girl. Was the difference between city and country greater for a boy or a girl? Why?
(Town, date, and distance in this question may be varied to fit available data. Other considerations, such as cost and religious requirements, may be included.)
12. Why must the academy in late colonial and early national times be considered an important development?
13. Using Woody's *Views of B. Franklin*, show why the Academy of Philadelphia did not accomplish what its chief promoter intended.
14. Using Pauline Holmes's *History of the Boston Latin School*, trace and explain the curriculum changes in that school in colonial times.
15. The early settlers merely "transplanted" European institutions. How much progress did their successors achieve before 1775?

FOR FURTHER READING AND STUDY

About ten per cent of the fourteen thousand sketches in the *Dictionary of American Biography* (New York, Charles Scribner's Sons, 1928-1936) deal with educators, teachers, scholars, and others whose "lives" form a part of the history of education. The work, in twenty-one volumes and an index volume, was edited by Allen Johnson and Dumas Malone. Volume 21 (1944) is a supplementary volume edited by Harris E. Starr. Colonial educators, such as Francis Alison, the presidents of Harvard and other colleges, Ezekiel Cheever, David James Dove, Michael Schlatter, Ebenezer Kinnersley, and many others, are included. The *Dictionary* will be useful for all periods of American education as will Barnard's *Journal* and Monroe's *Cyclopedia*, which have been mentioned before. The *Circulars of Information* issued by the United States Bureau of Education as "Contributions to American Educational History" between 1887 and 1903 cover all of the thirteen colonies but give the chief emphasis to higher education. A list of the *Circulars of Information* is found (pp. 253-254) in Donald W. Tewksbury, *The Founding of American Colleges and Universities before the Civil War* (New York, Bureau of Publications, Teachers College, Columbia University, 1932, 254 pp.). The colonial colleges are, of course, treated in this latter work and there is an extensive bibliography. An illustrated list of arithmetic texts and other mathematical books, published or reprinted in the American colonies is found in Louis Charles Karpinski, *Bibliography of Mathematical Works Printed in America through 1850* (Ann Arbor, University of Michigan Press, 1940, 697 pp.).

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17 UNDER THE NEW CONSTITUTION

DURING THE REVOLUTIONARY WAR, THE COMMON DANGER led to a certain unity among the states; but when the war was over, sectionalism and state sovereignty again strongly asserted themselves. The period between the close of the war and the adoption of the Constitution was an era of political confusion when the new sovereign states competed among themselves and on several occasions threatened armed hostilities within the confederation. Even before the Constitutional Convention, education was proposed as an important means of forming a more unified nation. With the establishment of the federal government, the need for education to promote national unity and citizenship became apparent to all thinking men. Washington and other leaders argued that education should be fostered and employed to overcome sectionalism, to prepare the young for the duties of citizenship in a republic, and to maintain the spirit of liberty. Many urged also that practical education would aid agriculture and commerce and would in this way promote the general welfare. Nor could the individual need of education be neglected in a country which claimed to be the land of opportunity for the common man. In this chapter we shall treat the period between the Revolution and the Civil War.

1. EDUCATION FOR A MORE PERFECT UNION

The Constitution was framed to strengthen the central government, to bind the states together, and to overcome sectional feeling, and the preamble proposed, as the first aim, the development of a more perfect union. Other aims would, indeed, become possible only if this one were attained. Many of the framers of the Constitution believed, with Washington, that education would be an additional means of drawing the people together. There were, however, obstacles to closer union which neither the Constitution nor the school was able to reach. Such obstacles were the wide dis-

persion of the population, poor roads, difficult communication, and property qualifications for the suffrage. These tended to divide the people and, since they were hindrances to the development of schools, they tended to keep the people apart by hindering the formation of agencies that would have drawn them together. We shall illustrate some of the above statements.

About the year 1800 the whole population of Great Britain was fifteen millions, that of France almost twice that number, while the United States with its vast area had only five and one-third millions. Manhood suffrage existed in only four states, and the one million voters of the republic were fewer in number than the slaves. Many felt that the new government gave them no more voice than the British had done. The center of population was northeast of the city of Washington; but there were already a half-million settlers in the Ohio valley, separated by a hundred miles of mountain and forest from the civilization of the East. Transportation, everywhere, was slow, costly, and laborious, and the West found it easier to reach her markets through New Orleans than by crossing the mountains. There was a good deal of sentiment and some intrigue, fostered by Spain and by Great Britain, for a separate nation in the Great Valley.

Communication was equally unsatisfactory. Franklin had organized an intercolonial postal system in 1753, but in 1800 it still required twenty days to cover the one main mail route from Maine to Georgia. Letter postage varied with the distance, and the cost of sending a letter from Boston to Philadelphia was twenty-five cents. As a result few letters were sent, in the year 1800 fewer than one per white inhabitant. The triweekly stage from Boston to New York took three days to reach its destination and the daily stage from New York to Philadelphia two days. Stage-coach travel with hotel charges cost about twenty cents a mile. These were the conditions where roads existed; that is in the neighborhood of towns and between the cities. In many settled parts of the country there were no roads. Jefferson wrote to his Attorney-General that five of the eight rivers which had to be crossed between Monticello and Washington had neither bridges nor boats.

The people and the government realized that improved communication and transportation were essential to the success of the union. They did not foresee the steamboat or the railroad, but they set about building the Cumberland Road from the Potomac to the Monongahela, another road southwest toward Knoxville, and a third from Philadelphia to Pittsburgh. The era of the canals also was just beginning. Towns were still small in 1800. Philadelphia, the largest, with seventy thousand people and New York with sixty were about three times the size of Boston, Baltimore, or Charleston. Educational facilities in these and even in much smaller

towns were far better than among the dispersed rural population. Rural education in Europe is village education, but the American farmer lives in an isolated home at some distance from all neighbors. This dispersion, greatest in the new West and the South but a basic fact also in the East, was one of the most difficult of educational problems. It is one that has not yet been solved, for the country school is still the weakest link in our educational system.

In the period of eighty years covered by this chapter, the cities with a population of more than eight thousand increased in number from five to one hundred forty-one; and the percentage of the total population in cities of the size stated increased from three per cent in 1780 to sixteen per cent in 1860. After the War with England (1812-1815), American industry developed rapidly. Cotton spinning became a New England industry and Pennsylvania became the center of iron and steel production. The steel, in turn, made possible the construction of the railroads and manufacture of the newly invented farm machinery. In 1844, when the telegraph was invented, there were about eight thousand miles of railroad lines in operation.

With the increasing demand for labor, immigration rose to a flood. Most of the newcomers found homes and work in the cities of the North and on the prairies of the West. The children of the migratory workers who built the railroads, canals, and telegraph lines and those of the new immigrants who did not speak English made difficult educational problems. As in England, slums and various social maladies such as pauperism and juvenile delinquency marred life in the factory towns, and, to mitigate such evils and provide a little education for the children before they entered the factory, first monitorial and charity, and then public schools were established.

More important in determining the future of the nation than the industry of the East was the westward migration of the people. Between 1800 and 1820 the population of the country increased nearly two million, and the extending frontier presented a staggering educational problem. It was a problem not solved in one generation, for illiteracy in the United States as a whole increased rather than diminished in the middle decades of the century. Frontier life was without luxuries and scanty in comforts. The frontiersmen were or became self-reliant and self-assertive individualists. The period of nationalism (1815-1825) was followed by the revival of sectionalism and the rise of the grass-roots democracy which characterized the party of Andrew Jackson. Before the Civil War, thirty-one states, six of them beyond the Mississippi, had been admitted into the Union. To a moderate degree at least, the educational needs of this empire were met through its increasing wealth and the resurgent democracy of its people.

2. EDUCATIONAL LEGISLATION

Education became a matter of popular and public concern after the Revolution; popular as shown by a growing volume of writing on the subject; and public through the action of state and national legislatures. Even during the war Pennsylvania, Massachusetts, and other states introduced

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

FIGURE 5

PLOT ALLOTMENT FOR
SCHOOLS UNDER THE
ORDINANCE OF 1785

sections on public education into the new state constitutions adopted at the time. The old Congress of the Confederation also acted. The Ordinance of 1785 provided that "there shall be reserved the Lot No. 16 of every township for the maintenance of public schools within said township." Ohio became a state in 1803 and was first to benefit from this clause. One section for schools for each township became the rule as new states were admitted into the Union; but some of the later states were given two sections and the last few states, four sections for each township. In each state the people through their legislatures were the ultimate custodians of the school lands. In some states, especially the new ones which profited by the mistakes of others, the lands were carefully managed and yielded large endowments for public education; but in many the lands were dissipated through inefficiency and dishonesty, both the results of a

too easy public morality. Even when this was not the case, land was plentiful and cheap in early times, and the financial returns were meager. Even after 1860 the standard price of public lands was only a dollar and a quarter per acre. Yet there was some return and some aid to schools; and one may argue that, if the lands helped to make a beginning in public education, an important service was rendered. Later generations could provide for the support of schools more easily than the early pioneers could establish them.

Another far-reaching act was passed by the old Congress. The Ordinance of 1787 for the organization of the Northwest Territory excluded slavery from the entire region north of the Ohio River. This ordinance also included what may be called a charter for public education in this large area from which five states were to be carved. The charter is in Article Three and is expressed in these words: "Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools, and the means of education shall be encouraged." This is intended to mean, and it is so stated in the sentence that follows, that the government shall encourage education, for the ordinance was a scheme of government.

State governments also took action. Their aid to the academies has been mentioned. Their constitutions frequently included clauses on education. By an act of 1787 the legislature of New York set up a permanent Board of Regents to charter all secondary schools and colleges and to control the education, on these upper levels, of the whole state. This idea of the centralized control of education, especially of secondary and collegiate education, cropped up about the same time and later in several of the states including Georgia, Louisiana, and Michigan. As noted in Chapter 12, the University of France was established by Bonaparte. In the United States, however, the nation was not yet ready to undertake an educational program. The only educational discussion in the Constitutional Convention concerned a proposed national university, which was to promote national unity. The Constitution does not mention education, but its adoption profoundly, though indirectly, fostered educational progress.

3. THEORIES OF DEMOCRATIC EDUCATION

The utilitarian individualism of Franklin which presaged the practice of the academy was met by a vigorous opposing current of social and political thought. The new theory was that education should serve not individual but state ends. In America an interest in educational principles can hardly be said to have existed before 1776. Except for William Penn and Franklin, both of whom introduced European ideas in language that the common man could understand, educational theory was almost a total blank until

we come to the writings of Jefferson, Benjamin Rush, Robert Coram, Samuel Knox, S. H. Smith, and Dupont de Nemours; and the last of these was a Frenchman living in America.

Jefferson in 1779 prepared a bill for the more general diffusion of knowledge which is our best source for his views on this subject. In reading it we should remember that it was not a statement of what he might have ideally wished to have, but a bill to be hopefully laid before the legislators of Virginia as an outline of what he expected to get. Even so it asked for more than they were willing to grant. The bill implied that a popular government can be maintained only if the people are intelligent and well informed, particularly on history, with emphasis on the history of popular liberty. It provided for free public schools everywhere to assure universal education, and which all children could attend without cost for three years and longer by paying fees, for a secondary school in each county, with free education for a few of the ablest boys, and for a state college also giving free education to a limited number of selected students. Others could attend by paying the usual fees. The last part of this scheme, the state college or university, was realized on a grand scale nearly fifty years later by the opening of the University of Virginia. Madison agreed with Jefferson that popular government cannot exist without popular information or the means of acquiring it; and he also supported the idea of school taxation. John Adams wrote the liberal and eloquent paragraph on education in the Massachusetts constitution of 1780.

Writers on education became numerous after the Revolution. They drew plans for public schools to be established and supported by the people for the preservation of liberty, democracy, and citizenship. They were not able to outline all the details of such an education. Benjamin Rush developed an argument and a plan for a national university and a plan of schools for Pennsylvania. The special preparation of teachers was urged, apparently by Elisha Ticknor and by Samuel Knox. Many urged a more utilitarian education in which science should show how natural resources might be developed. Robert Coram declared that education should be a state function and all children, in a public system of schools, should have the same opportunities. He was particularly insistent that country children should have the same opportunity as city children. As in the French Revolution, so in America a strong prejudice grew up against higher education as being undemocratic and tending to the growth of privileged classes. Coram was one of these egalitarians who thought it a shame that any should be sent to college where they would merely "learn to cheat the rest." Fortunately the country did not agree with him and a great many academies and colleges were founded in the two decades which closed the eighteenth century.

A centralized national school system was in the minds of several. Three of the writers named, Knox, Smith, and DuPont, proposed a national board of education which, as Knox said, should develop a uniform system for the whole country, able to unify the diverse peoples which made up "the citizens of this extensive republick." Knox and DuPont suggested a national board composed of members from each state, but S. H. Smith proposed a plan which may have been taken from Condorcet. Smith proposed to vest the national control of education in a board of scholars and scientists. How visionary, at that time, all such ideas of a uniform and highly centralized national system were is made clear by one historical fact, and that fact is this. For a hundred and fifty years powerful centralizing forces have been consolidating the national government, whose power like a snowball has been growing every time it has moved; but these forces have not yet been able to overcome our localism, particularism, and individualism sufficiently to create a federal department or a national system. The problem was in men's minds. Many thought in 1800 that education should be used to form a more perfect union. They did not agree on the methods or the next steps to be taken to aid the children on the farms and in the villages.

4. THE LANCASTERIAN SCHOOLS

The actual next step did not tend to help the rural children directly. They had to wait another century until the modern elementary and high school, scientific agriculture, good roads, and the autobus were developed. The next step was an effort to aid city children by the introduction of the Lancasterian monitorial system. The main agencies of this movement were private; and for decades after 1800 progress continued to be made chiefly not through state action but through the labors of private persons or groups, incorporated societies, and churches. The Lancasterian schools were promoted by each of these; but one result of the movement was to further public education. In many cities the Lancasterian schools led directly to the establishment of public schools. Cincinnati, Louisville, and Detroit, in the far West of that time, and New Haven, Albany, and Baltimore, in the East, were only a few of the scores of cities which welcomed the Lancasterian monitorial schools. The system continued in use in many places until 1830 or later; and we must not, because it was finally discarded, suppose that it had no value.

About 1805, New York outdistanced Philadelphia to become the largest city in the country; and there the first Lancasterian school was opened in 1806 and there the monitorial system received its most extended trial. A small group of Friends and others formed a Free School Society, later

called the Public School Society, and secured a charter for the purpose of providing schooling for children "who do not belong to, or are not provided for by any religious society." They developed and operated a number of monitorial schools; but although active for almost half a century the society was never able to reach all the children, nor could any other system, without a compulsory attendance law, have reached all the children of a rapidly growing city. For a time the Society attempted to charge those who were able to pay a very moderate fee, but this proved to be a mistake. The attendance immediately declined because the poor refused to "confess their poverty." For a time, the Society received financial aid from both the state and the city, but this also led to difficulties. Various churches insisted on sharing the funds on the ground that the Lancasterian schools were also sectarian. They argued that if the state or city supported the schools of one sect it should also support the schools of every other sect. As a result in 1842 New York City established a Board of Education and laid the foundation of a public school system. The Public School Society continued to operate monitorial schools until 1853 when it transferred its property to the city school district and ceased to exist.

Elsewhere the monitorial schools had disappeared twenty years earlier but not before they had taught several useful lessons. They were, first of all, cheap. In New York City the per pupil cost was one dollar and twenty-two cents per year in 1822; but by reason of higher prices and greatly reduced classes the per capita cost rose to almost six dollars in 1852. The Lancasterian schools convinced many doubters that the cost of universal education would not need to be prohibitive and they accustomed many parents to pay something at least for the education of their children. The schools were fully organized and prepared the way for grading and class management. Lancaster used sand tables, charts, slates, and slate pencils, even setting up a factory to make this and other equipment, and he familiarized teachers with the idea that schools should not depend exclusively upon books. The *Manual of Instruction* he prepared was a teacher's handbook. Teachers in the system were usually given a short course of instruction and apprenticeship before being given charge of a school. The idea of professional training was fostered in this way. In Philadelphia, where the Lancasterian schools were received with as much enthusiasm as in New York, a city normal school grew out of the Lancasterian training classes. In Philadelphia and in many other cities free public schools resulted directly or indirectly from the Lancasterian movement. These were useful services to education, but the schools themselves, as compared with the best schools even of that time, were poor. The routine, the rigid organization and semimilitary discipline, the mechanical instruction and a curriculum restricted to the formal elements of the different

branches were all bad features. Yet the general influence of the monitorial schools was favorable to the extension of education; and both their introduction and their early disappearance after they had made their contribution were forward steps in the path of progress.

5. VOCATIONAL EDUCATION TRENDS

A similar verdict may be passed upon the Fellenberg manual labor schools which taught practical agriculture and handwork by a sort of apprentice system. The students were employed for a part of the day in the productive work of a school farm or shop while the rest of the time was devoted to study. The purpose was in part vocational, to educate working farmers. The same plan with a similar vocational emphasis was also introduced into reform schools. In some of the academies, colleges, and theological seminaries, the manual labor system was introduced to enable students to earn their way; and also, in the absence of school athletics, to provide physical exercise.

Manual labor education aroused great enthusiasm about 1820, reached its peak in the early thirties, and declined rapidly thereafter. Vigorous propaganda for it was carried on by the *National Intelligencer*, a Washington paper, the *Albany Cultivator*, the *American Farmer*, and the *American Annals of Education*. Woodbridge, who edited the *Annals*, had studied the Fellenberg institutions at first hand in Switzerland and seems to have had a share in bringing one of Fellenberg's disciples, F. A. Ismar, to the United States where Ismar delivered speeches, wrote articles, and helped to establish a combined manual labor and classical school in Pennsylvania. He proposed a normal school to prepare teachers for manual labor and other schools; but he seems not to have had any great influence. The agricultural and rural press was interested in the vocational aspects of the schools, and in the efforts to unite "labor and science." The editors held that all schools should give a portion of each day to the "teaching of some useful mechanical branch, such as practical agriculture, or horticulture." Many held the optimistic belief that boys could pay their way in college by simple routine labor such as caning chairs, making boxes, or working on a college farm. And this can indeed be done, but most schools found that to balance their books required an ability in marketing and management which they did not have at command.

Many colleges and many academies which later became colleges introduced the manual labor scheme. Among these were Oberlin, Denison, Wabash, Knox, Western Reserve, Davidson, and Wake Forest. A society for promoting manual labor education was formed in 1831, but it lapsed after one annual report by Theodore D. Weld, its general agent. The

movement had an influence upon the growing interest in agricultural education. And it should be noticed that the land-grant colleges about 1870 introduced similar plans and that there is a family resemblance between the Fellenberg idea and those cooperative education plans which have been developed more recently at the University of Cincinnati in technical education and for more general purposes at Berea College, Antioch College, the high school of Fitchburg, and many less widely known instances.

Two schools which were directly affected by the manual labor plan must be particularly mentioned: the Gardiner Lyceum, an agricultural school which was opened in 1821 near Portland, Maine, and the Rensselaer School of Troy, New York, which began in 1825. The Gardiner Lyceum was established to prepare "scientific farmers and skillful mechanics." The school rendered excellent pioneer service for a decade but it did not become a permanent institution. It has been called our "first agricultural school" and the title may be justified although a few earlier attempts to teach agriculture had been made. The great campaign to "do something for the farmer" was, however, beginning and henceforth the subject was not allowed to lapse until the Morrill Act was passed in 1862.

The Rensselaer School was originally formed to prepare teachers and science lecturers for rural schools. After a brief trial the manual labor feature was discarded and a highly original combination of laboratory, project, and field work was substituted. Amos Eaton was the head teacher and he conceived and carried out the idea of having the pupils lecture to each other, explaining and demonstrating the observations and investigations of the field and laboratory. Eaton was one of the most inventive of our earlier teachers and his plan worked almost too well, for many of the early graduates of the school became distinguished scientists and did not devote themselves to rural school and agricultural improvement. As state geologists, agricultural chemists, and founders of agricultural experiment stations, their work ultimately aided the farmer, but directly the rural school benefited little.

With the coming of the railroads, Rensselaer became an engineering school. Many other schools, academies, and colleges also began to teach civil engineering about 1835. John Millington's *Elements of Civil Engineering*, which may have been the first American textbook in its field, appeared in 1839. At first it was the new and marginal schools and colleges that offered engineering courses, but before the Civil War the old and rich institutions also began to establish schools of applied science. From about 1840 attempts were made to secure federal aid through land grants for agricultural and engineering education; and these efforts, as we have suggested, succeeded in 1862 when the Morrill Act was passed. This will be more fully considered later.

Another important beginning in vocational education was made by the rise of the private business colleges about 1820. These taught commercial arithmetic and English, penmanship, bookkeeping, and other subjects. The private business college was itself a small business, carried on for profit by teacher-owners. They were not colleges but were partly elementary, partly secondary schools. Although the new field attracted many reputable, qualified teachers there were no external standards and no supervision to keep out charlatans. Edmund J. James, a leader in higher business education who was later president of the University of Illinois, considered the business college a peculiarly American institution. Nothing like it, he said in 1893, was found in other countries. It embodied, he believed, the defects and excellences of the American character in its spontaneous development, its rapid and wide diffusion, and its rough adaptation of primitive materials to urgent needs. Among the early pioneers were James Gordon Bennett, Peter Duff, and R. M. Bartlett. When the typewriter was invented shortly after the Civil War, typing and shorthand became two of the most important subjects. The private business college was in control of the field until about 1880 when the public high school began to introduce commercial courses. Forty years later the high school had largely driven out the business colleges, although many of the stronger ones are still active today. The field has greatly expanded and many collegiate and graduate schools of business have been established. The first of the collegiate schools of business was the Wharton School (1881) of the University of Pennsylvania.

6. THE TEACHING OF HANDWRITING

Several changes in school writing materials came in the period. Slates were introduced by the monitorial schools and wall blackboards were used after 1820 in many schools. About 1830 the steel pen began to displace the quill pen, a change which greatly affected the work of teaching. While quill pens were in use the teacher had to spend a large amount of time in school and after school hours in making and mending pens. The lead pencil and inexpensive paper displaced the slate; and the fountain pen, invented before 1700, was so greatly improved that it came into general use by 1900. Several systems of teaching penmanship, the English system of Joseph Carstairs, the American system of Platt R. Spencer, and the modification of the latter by A. N. Palmer were tried in succession. Vertical writing about 1890 and manuscript writing about 1915 were tried for a short time and discarded. The typewriter has greatly altered the place and reduced the importance of penmanship as a school subject; but a "fair hand and swift" is still, as Benjamin Franklin said, "useful to all."

7. SCHOOLS OF BOSTON TO 1820

Educational conditions can be studied by taking a selected example and tracing the development of the schools of a particular city. We shall choose Boston, which was far in the van and was breaking new paths on many occasions but which was also extremely traditional on others. We shall go back to the beginning. The citizens of Boston on April 13, 1635, at a "general meeting upon public notice" agreed to ask Philemon Purnmont to become their schoolmaster, but it is not known whether he complied with the request. Either then or in the following year the school was opened and perhaps Latin was taught from the beginning, as it certainly was a little later. It is clear that from an early day reading, writing, and arithmetic were also taught in the school; and this was in harmony with the custom in England that the smaller Latin schools should teach the ABC's to little boys as well as Latin composition to the big ones. This practice, which Hawthorne in a story in *Grandfather's Chair* associates with the teaching of Ezekiel Cheever, was probably in vogue from the beginning. Eventually the school was called the Boston Latin School. It was and is a public school. Private schools also began to appear in the seventeenth century and at times, as we shall show, these enrolled more pupils than the city schools. In 1666 an assistant to the master of the Latin School was appointed to teach writing and probably other subjects also; but when the curriculum became more strictly classical, the boys of the Latin School were sent to private schools to be instructed in reading, writing, and arithmetic, at the parents' expense.

Although a common English education and preparation for college were given in the same school and by the same teacher, these were not considered equivalent or even comparable types of schooling. As soon as Boston was able, the city provided for separate "free schools to teach the children of poor people"; and in providing these the selectmen hit upon a curious plan which was known as the "double-headed system." Under this plan separate reading schools and writing schools, each under its own principal and management, were established. The former taught reading, English grammar, and at a later date, geography; and the writing schools taught penmanship, arithmetic, and bookkeeping. One-half of the pupils attended a reading school in the morning and a writing school in the afternoon; and the other half reversed this order, attending a writing school in the morning and a reading school after the midday meal. This double-headed system was continued until about the middle of the nineteenth century.

New schools were established as the local demand or the state law re-

quired. The North Latin School was opened in 1712 in obedience to a law which had been passed in 1683 and which required towns of five hundred families to have two Latin and two writing schools. Only boys were admitted to either type of school. The two writing schools were created at once, but the city took twenty-five years to comply with the Latin school requirement; and the North Latin School was again abolished as soon as "the new system of education," which permitted this to be done, was adopted in 1789. There was slight need for two Latin schools since the two together in 1785 enrolled only sixty-four pupils. This decline from one hundred fifty-nine pupils in 1741 was probably caused by the Revolution. A third writing school had been established in 1720 and two more were added later.

The new system of education, a local application of the Massachusetts School Law of 1789, was devised by a committee of eminent Bostonians, including Samuel Adams, which presented its report to the town meeting in the same year. This provided for only one Latin school, three writing, and three reading schools. The "new system" of 1789 also provided, for the first time, for the education of girls in the public reading and writing schools. They were to attend during the summer months from April to October. The rule adopted in 1785, that no children could be admitted into the public reading and writing schools below the age of seven and not until they were able to read, was continued in force. This preparation in reading they were expected to receive in the private dame schools. Under the "new system" a regular school committee or school board of twelve members, elected annually by wards, was given charge of the schools. Obviously the purpose of Samuel Adams and the committee was to "democratize" education. As the need developed other schools were added until in 1845 Boston had nineteen reading and the same number of writing schools.

At the beginning of the Revolution the schools were closed and continued so for a year or longer. When they were reopened many families had left the city, many children were occupied otherwise, and the attendance long remained below the previous figures. There were, for example, 823 pupils in the schools in 1772, and in 1785 only 564; and of the latter, as we have seen, only 64 were in the Latin schools. Not until near the end of the century did the public schools enroll 900 pupils, while the private schools of Boston at the same time had 500. Furthermore, the private schools were gaining on the public institutions. Twenty years later (1817) Boston with a population of 40,000 had only 2356 pupils in her reading and writing schools while 4132 pupils were taught by 162 private teachers at an annual cost of fifty thousand dollars. At the same time there

were between 500 and 1000 children of school age who did not go to any school whatever.

After having enjoyed the benefits of public education for a century and three quarters, Boston was able to enroll only one-third of her school-age children in her public schools. Two-thirds were in private schools or on the streets. This was the sad result of two conditions. The public reading and writing schools were considered and treated as schools for the poor. And secondly, as indicated, no child could be received in a public reading school until he had learned to read in the Bible sufficiently well to keep his place in the book as the classwork proceeded. To acquire this minimum of knowledge, children had to be taught at home or sent to private schools. Boston might have removed this defect by increasing the number of public schools and ordering them to admit children at the age of six or earlier. The city chose instead to establish a whole new system of primary schools to be taught by women at much lower salaries than the masters of the reading and writing schools received. Financial economy was doubtless one reason for this plan. The year 1817 was the last of the old regime and 1818 the first of the new when Boston began to open public primary schools to teach young beginners to read.

We shall trace the progress of this revolution. The introduction of Sunday Schools into Boston in 1816 accidentally touched off an explosion by revealing that the city had a large number of illiterate children. A citizens' organization spurred the selectmen to appoint a committee to investigate conditions; and they admitted finding over five hundred children of school age who were not attending school. This was later shown to have been a gross understatement, for parents did not like to confess their poverty nor the committee to report large numbers of illiterates. But even five hundred was more than one-fifth of the public school enrollment at the time, yet it was by the complacent committee "deemed to be a very small number" in so large a city with many "foreigners and strangers, who are ignorant of our institutions, or have not learned to value them." It did not occur to them to suggest that the public schools should be used to acquaint the newcomers with our institutions.

The report was signed by Charles Bulfinch, a noted architect, who had prepared at the Boston Latin School for Harvard College from which he graduated in 1781. And the document betrays a view of public education that must be noticed because it was common. Mr. Bulfinch reminded his fellow citizens of the heavy school tax which was assessed upon their property and expressed the opinion that they ought not to expect public schools to be as good as private schools, because "from their public character there must arise some disadvantages which are not felt in private

schools." Among the disadvantages which were considered inherent in public education were large classes, a narrow curriculum, and limited aims. This adverse report was not laid before the people in town meeting but was at once printed and distributed as if to close the issue. But Elisha Ticknor, James Savage, and others immediately reopened the question in the newspapers and presented a new petition in town meeting. Then the selectmen and school committee still further showed their hostility to the extension of public education by enlisting the services of prominent Bostonians, including a United States Senator, to fight the public primary school movement; but they were signally beaten. A separate primary school committee was constituted and the sum of five thousand dollars was voted for the first year. Thirteen hundred children applied for admission to the eighteen schools that were established in 1818.

The new primary schools for children between the ages of four and seven years were so successful that the awkward system of separate management by a special committee was continued down to 1855 when the primary schools were merged with the grammar schools in a unified system. The primary schools were reading schools pure and simple. The instructor began with the alphabet and, after dealing with the spelling of syllables and easy words, ended in the reading of English prose. There was no connection with the infant school movement of Robert Owen; and when a few years later some liberals attempted to introduce the infant school ideas they were vigorously repelled by the primary school committee.

The schools, of which eighteen were in operation the first year, thirty-six the third year, and so on in ever mounting numbers as the city grew, were invariably taught by women. The annual wage or salary was two hundred dollars or two hundred and fifty when the teacher provided the school-room. After the primary system became well established, no Boston child was debarred from the public schools of the city because his family was unable to send him to a private school to learn to read. The "resurgent democracy" of which we shall speak in the next section was doubtless influential in the promotion of the primary school movement in Boston.

Within a few years after the opening of the primary schools, realizing that her system was still incomplete, the city of Boston opened the English Classical School (1821). This was a free public secondary school that emphasized the English language and practical mathematics. It is considered to be the first high school, a name that was adopted when Boston in 1824 voted to call its new institution the English High School. The word English was used in both of the early titles to indicate the absence of ancient and all foreign languages from the curriculum; but later high schools soon began to teach the languages to prepare pupils for college. For

a long time the high school competed for public favor with the academy, and it did not become the leading secondary school until after the Civil War. Its spread and internal development will be considered in Chapter 20.

8. RESURGENT DEMOCRACY

The age which followed our second war with Great Britain was an era of expansion, accompanied by strong democratic and humanitarian movements. The tide of immigration was flowing toward the United States and there was a marked urban and industrial development. The growing practice of providing national aid and encouragement to internal improvements, including canals, railroads, and manufactures, was called the American System. The daily newspaper with paid reporting was crowding out the weekly and circulations were mounting in geometrical progression. Gas for lighting was just coming in to aid study and reading in the evening. John Griscom, a school teacher already becoming known and later to become eminent, was engaged on January 26, 1816, in demonstrating the new light to the mayor, aldermen, and businessmen of New York City. He showed that it was cheaper, cleaner, and more brilliant than candles. The application of steam power, inventions, and manufacturing were developing rapidly. We were becoming an industrial nation. From the mountains of Vermont the movement for manhood suffrage spread along the western frontier and finally overcame the resistance of the conservative East. It was a combination of frontiersmen and workingmen in the cities that elected Jackson and gave to Jacksonian democracy a more popular trend than the older democracy of Jefferson had exhibited.

Liberal and humanitarian reformers became so numerous and insistent that Emerson declared that every thinking man had a plan for a new society in his vest pocket. Some of those designs, it must be confessed, were European dreams which fitted even less well into the new society of America than into the old one of their origin. Fourierism, after elaborate publicity by the *New York Sun*, was briefly tried in several places including Brook Farm where Emerson was a cool and collected spectator, but it was not a lasting influence. New Harmony in Indiana harbored Robert Owen's brief unsuccessful attempt to reform the world quickly. Of the one or two hundred ideal communities founded in the nineteenth century, not one left any permanent impress upon American society or had any important message for education. The humanitarian movements accomplished far more. The reforms of prison management and criminal law, and of the asylums and their treatment of the insane and defective, the building of hospitals, the discovery of anesthesia, these were positive gains.

Religion and religious controversy were to occupy a large share of the

attention of Americans in the nineteenth century. Protestant foreign missions, starting from a famous meeting at Williams College, were just beginning to develop American missionary interest in China, India, and Africa, and led eventually to the establishment not only of native churches but also of educational institutions such as Robert College in Constantinople, the University of Beirut, and Yale-in-China. The arrival of many Catholic immigrants aroused the fears and prejudices of Protestant leaders and incited them to support both the public school movement and the foundation of denominational colleges as means to forestall what they regarded as a threat that the West would become Catholic. At the other end of the religious spectrum, Unitarianism was developing and also affecting the religious views of many who did not become Unitarians but either remained in the orthodox communions or on the other hand moved beyond Unitarianism itself into complete secularism. A philosophical version of Unitarianism was the movement known as transcendentalism, a sort of popular Platonism. But the great moral and economic question of the day was slavery, abolitionism, and on this the churches, which in early days had opposed slavery, became hopelessly confused and divided, once the issue was sharpened. Only the Friends, the Mennonites, and other unpopular sects stood by their earlier convictions. The Quaker Poet, Whittier, in whose works antislavery poems fill a hundred pages, hailed William Lloyd Garrison as the "Champion of those who groan beneath oppression's iron hand," and dared to ask:

Is this the land our fathers loved,
The freedom which they toiled to win?

Certainly it was not an accident that American education, democratic and widespread, first became an ideal and gradually a fact in the period of Andrew Jackson, of the abolition movement, of religious liberalism, and of moral and social reform. Universal public education, like those great causes, gave new hope and opportunity to the common man.

9. EDUCATIONAL PROMOTION

The educational renaissance was not the work of a few leaders, although there were great leaders, nor the achievement of any one class or narrow section of the people. Professional men and mechanics, labor leaders, and social reformers cooperated with teachers and political leaders, especially the state governors, in raising the issues and informing the people. Yet the victory was not an easy one. The opposition was powerful, and in the older states there was a bitter struggle over state control, over the school tax, over religious as against secular education, and over other questions. Con-

servative religionists, private school interests, men of property, and those who fancied themselves aristocrats are said to have opposed public education. But no sharp lines can be drawn. It would be easy to name exceptions; and when exceptions become numerous they no longer prove but tend to annul the rule. Certainly many successful private school teachers like Albert Pickett, many rich men such as James Wadsworth (1768-1844) of New York, and clergymen like Bishop Potter of the same state fought vigorously for public schools.

The country was still rural, the demand for manual labor was insistent, and parents felt that their children were needed on the farm. Because of parental pressure, business conditions, and the lack of convenient schools many children left school early or perhaps never attended any school. From the most illiterate class also there was opposition. There were those who considered that any who had an education beyond the three R's were likely to be proud, or were afraid to work, and were trying to live by their wits. But the growing native population, the rising flood of immigration, and the cityward trend created a need for new schools, better schools, and a more diversified education, a need which no private agency would have been able to satisfy.

From the birth of the nation, as we have said, public men began to urge the development of education for civic and political ends. In the new republic, it was agreed, citizens must be taught to value their new freedom, to understand their government and the questions with which it had to deal, and to serve their country both patriotically and ably. "In proportion as government gives force to public opinion," declared Washington's Farewell Address, "it is important that public opinion should be enlightened." Economic and social arguments were often added to the political one. It was pointed out that the vast resources of our country could be developed only by trained men and that this implied the need for more advanced schools. The need to conserve our human resources was indicated in the phrase of Horace Mann, who held that "the more schoolhouses we build the fewer jails we shall need."

The educational obligation of the government was constantly pressed by the governors of the states. Selecting from scores of parallel statements by the governors of most of the states we present one made in 1826 by DeWitt Clinton of New York. He wrote: "The first duty of the government and the surest evidence of good government, is the encouragement of education." Some of the governors in their messages went into the education question in great detail. Governors Worthington of Ohio (1817) and Edward Everett of Massachusetts (1838) urged the establishment of state normal schools; and Everett had an important share in the founding of the first such institution.

Although labor organizations were not yet numerous or powerful, they expressed themselves strongly in favor of public education, urging particularly that a democracy should provide equal opportunity for schooling all citizens, the poor as well as the rich. The extension of manhood suffrage led the early labor groups to work for public education although this was not their foremost aim. The ten-hour day, and the abolition of mechanics liens and of imprisonment for debt were among the earliest objectives of organized labor, but the demand for free, tax-supported public schools was not far behind.

The factory system was yet in its infancy in 1825, but an education committee of the Massachusetts Senate found that in most industrial towns of the state the children employed in factories were receiving no schooling. After the customary twelve-hour day there was little time or will to study. Illiteracy was common. A writer in the *Mechanics Free Press* estimated that not more than one-sixth of the youthful textile workers of Pawtucket and Philadelphia were able to write their names. Some of the manufacturers professed to believe that schooling for factory children was not desirable. Some employers refused to release a child for school attendance under threat of dismissing the whole family from the mills. A contemporary writer said, "We have even known these threats put into execution." The Massachusetts Senate Committee thought protective legislation should be enacted but they were not prepared to submit a bill; and it was not until 1842 that Massachusetts, first of the states, passed a child labor law and provided that every small child must be given opportunity for twelve weeks at school annually. Massachusetts was also the first state to enact a compulsory school attendance law (1852).

The organized workingmen of Philadelphia, before the election of 1828, asked the candidates for public office for their views on an equal and general system of education. In the following year a committee of workingmen reported upon the schools of Pennsylvania. They pointed out the defects of the private schools and the "venal administration" of the law of 1809; they referred to the decay of apprenticeship and the associated provision for schooling; and they urged the admission of small children to schools so that they might obtain a little education before they became employable. They explained that many parents were too poor to clothe their children for school, to buy books for them, and to meet the individual expenses of any school, even a free school. As a solution for these difficulties they proposed a manual labor school in each county. The New York Working Men's Party contended for free schools supported by public funds as a right, and they attacked the custom of appropriating money to private colleges and academies which benefited chiefly those who did not need such help. A more radical program for national public boarding

schools was rejected by the party. The government was to furnish not only education but also board and clothing in order that poor children might have opportunities equal to those of the rich and that "the spirit of democracy which Jefferson labored for half a century to plant in our republican soil" might become universal. Although repudiated, this radical proposal of 1830 is significant of the mind of a section of the working class.

Many newspapers of the day were opposed to the movement for public schools. Schemes of universal education were called socialistic, economically unsound, and, in a competitive society, undesirable. The advantages of the prevailing plan of competitive private education, in which the schools had to be good in order to survive, were painted in glowing colors. They expatiated on the serious defects of the existing public schools in Connecticut and Massachusetts as "proof" that the whole idea of a thorough education in public schools was utopian. These editorial views in the press of the country show that the workingmen's propaganda was having some effect but it is easy to overemphasize its importance. Organized labor was still too weak to exert a preponderant influence and the crisis of 1837 scattered its forces. Public education was achieved by the combined action of men and women of all professions and social classes under the leadership of idealists, humanitarians, teachers, and publicists. The laws which were necessary for the creation of public school systems were passed upon the persistent demand of a majority of the public.

A second phase of the propaganda effort dealt not so much with the establishment but rather with the improvement of schools. And it was correctly judged that a chief need lay in finding and preparing better teachers. Early in the century the Lancasterian monitorial system had been regarded as the ready-made solution of the two connected problems of universal education and teacher training. It did not solve either but it succeeded in arousing public interest in them. The academies also did something to raise the general level of education and to prepare teachers for both elementary and secondary schools. A few of them also attempted to teach the elements of psychology and of school management. An example was furnished by Samuel Read Hall who taught at Concord, Vermont, in 1823 and a few years later published his *Lectures on School-Keeping*. James Gordon Carter also worked at the same task before the advent of state normal schools. In the third place, the incoming Pestalozzian doctrines and a growing acquaintance with German teacher-training gave renewed and stronger emphasis to the demand for professional education.

New instruments to carry these ideas to the people and the teaching profession were invented. Two of these were the educational magazine

and the teachers' association. Educational journalism was born in 1818 when Albert and John W. Pickett of New York brought out *The Academician*, a sixteen-page semimonthly at three dollars per year. This ran for only twenty-five numbers. It presented a psychological theory of education based upon the doctrines of Bacon and Locke, it reviewed for its readers the ideas of Pestalozzi, Fellenberg, and Lancaster, all of whom were then living, it gave practical advice to teachers, and it published school news. It was a sensible and wise, but not very lively, paper. A few years later, William Russell founded the *American Journal of Education* and this was continued under the title *American Annals of Education* by William C. Woodbridge. The state journals of education emerged soon after. *The Common School Assistant* (1836), edited by J. Orville Taylor at Albany, was privately supported but was distributed to public school teachers. *The Ohio Common School Director* (1838), edited by Samuel Lewis, was circulated at public expense. A little later in the same year Henry Barnard began to issue the *Connecticut Common School Journal* and Horace Mann the *Common School Journal* for the teachers of Massachusetts. Besides spreading educational information and plans of teaching and school management, the state journals served as means of communication from the state office to the public school teachers. By 1850 more than three score educational magazines had been founded, but many were short-lived.

The earliest associations of teachers were founded for the protection and advancement of their members rather than for the improvement of education. One of these, founded for social and benevolent purposes and to collect unpaid tuition fees, was formed by the private school teachers of New York City as early as 1794, and one of its few public acts was to welcome the famous refugee, Joseph Priestley. Similar societies were organized in other cities. By 1830 a great change had come about. Teachers developed a keen public spirit and looked forward to the establishment of state systems of public schools and the creation of a profession of teaching. These later societies welcomed men of many callings into their membership. Two of the most influential early associations of this kind were founded at Boston and Cincinnati about the same time (1831). These were, respectively, the American Institute of Instruction and the Western Literary Institute and College of Professional Teachers. The latter held its last meeting in 1845, but the former still survives. Both were regional associations, one affecting chiefly New England and the other the West of that day. The American Lyceum attempted to perform similar functions on a national scale. These societies were in turn followed by state associations of teachers and in 1857 a national association was formed out of which the present National Education Association has grown.

10. THE AMERICAN LYCEUM

Scientific societies, called lyceums, whose purposes were to collect natural history specimens, to study the natural resources of the country, and to provide lectures on such subjects, were founded in several localities before 1820. It was only a short step from these lyceums to the local "associations of adults for mutual education," which were proposed by Josiah Holbrook in the *American Journal of Education* for October 1826. Holbrook listed as the chief aims of these associations the opportunity for cheap, practical education, and for the application of science to the domestic and useful arts and "to all the common purposes of life." He is considered the founder of the lyceum movement for he made the important suggestion that the local groups should be organized into county and the county into state organizations, and indicated in his first proposal that it might be advantageous to form a general board for all the associations in the whole country. For several years Holbrook devoted all his time to the extension of the lyceum movement.

The local lyceums, which spread rapidly in the northern states and reached into the far West and the South, carried out the adult education which the promoter intended; but the state and national associations undertook a task which he had not mentioned, namely, the promotion of public education and the development of state school systems. The lyceums reached the number of eight hundred within five years, and three thousand within ten years; and these were united into numerous county associations and state associations. As a means of instruction for adults and a system of forums for the best speakers in the whole country, the local lyceums had great value.

The national association, called The American Lyceum and composed of delegates from the state lyceums, held its first annual meeting in New York City in 1831. While the American Lyceum gave attention to the spread of local lyceums, a consideration of the main topics which were brought before the national meetings shows that the national body was mainly occupied in promoting public education. The association was a means of arousing public interest in education and, although there is no exact measure, it undoubtedly helped to create sentiment for the state departments of education which were established during its time.

11. RISE OF STATE SYSTEMS

The Constitution guarantees a republican form of government to each state; it was not thought necessary to guarantee to each a democratic system of education. Although certain beginnings had been made early, it

was in the second third of the nineteenth century that our system of democratic education began a vigorous growth. It was then that the states actively undertook to educate their children for democracy.

From early times the colonies, and later the states, passed a large volume of laws dealing with education; but the administration and enforcement of this legislation were left to the courts and the ordinary officials. As public education grew the need came to be felt for a state agency to interpret school laws, to spread ideas and information, to supply professional leadership, and to exercise some supervisory and administrative functions. Such duties were assigned *ex officio* to an officer, usually the secretary of state, or to a newly chosen officer who was variously styled superintendent of free schools, or of common schools, or, in a few states, superintendent of public instruction.

Strong traditions impeded the development of the powers and prestige of the new office. The old historical tradition that the education of children should be directed first by their parents and then by the church was against public education and still more against state administered education. But a second party, that of the frontier democracy, held that if education were not to be private then the local community should be allowed to manage it without state control. In several states the superintendency, after having been established at a politically favorable moment, was again abolished when its enemies had mustered their strength. The arguments against the office were sometimes opposed to each other and frequently contradicted the facts. The office was declared to be too expensive for a state which may have counted a half-million people, or too ineffective when the officer was given almost no powers, or Prussian in origin or tendency, although it was, with slight exceptions, American in both respects.

New York, which had long before placed a Board of Regents over secondary-higher education, was in 1812 the first state to create the office of State Superintendent of Common Schools. The first and only appointee under this law was Gideon Hawley who, after an able and successful administration, was for political reasons removed from office in 1821. The secretary of state acted as superintendent until 1854 when a separate office of Superintendent of Public Instruction was again created. Fifty years later in 1904 the administration of elementary and of secondary-higher education was combined under one executive with the bulky but historically interesting title of President of the University of the State of New York and Commissioner of Education.

Maryland established the office of state superintendent in 1826, abolished it in 1828, and re-established it in 1864. For Ohio the corresponding dates are 1837, 1840, and 1853. The history of the office in Connecticut, Rhode

Island, Iowa, Missouri, and other states shows similar advances and retreats, and finally permanent establishment. Elsewhere, as in Illinois in 1825, Louisiana in 1833, and in other states at other times, *ex officio* officers were provided before the state superintendency as a separate office developed. But Michigan in 1836, while it was still a territory, Massachusetts in 1837, and Kentucky in 1838 created state school superintendencies which have continued to function without a break. This list could be extended. Of the thirty-six states and organized territories existing in 1861, thirty had provided state school officers.

The movement was far broader than we have indicated. The decades before the Civil War were marked not by the revival but by the birth of public education as we know it today—a broad and generous extension of educational opportunity to “all the children of all the people” in a school system created by the people themselves. This was the ideal at least, and on this plan the states proceeded. We should honor our colonial forefathers for their efforts to provide schools but of such an educational ladder they had no conception; this is a program developed in the nineteenth century, not the seventeenth. The development of the state school office may be regarded as an index to the growing will of the American people to develop public education.

12. SECURING PUBLIC SUPPORT FOR EDUCATION

Public education is usually financed through local taxation, state appropriations, and federal aid. Small amounts, less than ten per cent of the total in most states, are obtained from other sources such as income from permanent funds, fees, and donations. The process by which the public has educated itself to consider taxation and the appropriation of public funds as the fairest, most dependable, and most adaptable method of educational support may be regarded as an historical experiment which has now been carried on with varying success for more than a century.

A century ago there was no such agreement upon the best methods of supporting schools. Most schools were private then and charged tuition or depended upon contributions from the wealthy or from organized groups such as churches. Usually there were also numerous special charges, for firewood, for supplies, for candles in evening schools; books were provided by the pupils or their parents. Lotteries were a common source of support for schools and colleges, and were frequently authorized by state legislatures. As we learn from sober history, and not only from school stories and poems such as the *Hoosier Schoolmaster*, *Ichabod Crane*, and Whittier's *Snow-Bound*, many teachers “boarded round” among the families of their district. Boarding the teacher was a form of school support, and

it was not the only example of "payment in kind." An Ohio teacher in 1825 contracted to accept Indian corn at thirty cents a bushel; and a governor of Massachusetts paid the expenses of his son at Harvard College in the same commodity. Rents from lands or fish weirs, income from herds of cows, contributions, bequests, license fees collected from banks, theaters, liquor sales, and marriages, occupational taxes, the rate bill, and other items were among the sources of funds applied to schools before taxation was fully accepted. Clearly such financing did not assess the costs fairly and such sources were not dependable or readily adaptable to changing needs.

The monitorial schools rendered a service by demonstrating that a little education could be provided very cheaply to large numbers. Another effort to support a general system of education was based upon the federal land grants. The initiation of these was contemporary with the introduction of the monitorial schools. It was soon discovered that the land grants were also inadequate, although this was already well known to those who were familiar with the history of rents and land endowments for schools from early colonial times down to the period in question.

Those states which had come into the Union before Ohio did not share in the federal land grants for schools, and many of them formed state school funds from other revenues. Connecticut in 1795 sold her vast and rich "Western Reserve" of nearly four million acres for the trifling price of about thirty cents an acre and through this transaction added over a million dollars to a school fund which had been established almost fifty years earlier. As a result the state was for a time so wealthy that she could pay for the simple and meager schools of that time without taxation. The people, consequently, almost forgot the existence of their schools, neglect bred contempt, the "better people" patronized private schools, and it required the statesmanship of Henry Barnard to teach them their duty to provide good schools for all the children. Most of the permanent school funds in the older states were established in the first third of the nineteenth century. By themselves they were everywhere inadequate; and if as in Connecticut they were sufficient to pay for a short annual term of school, the unfortunate result was that the people went into an educational coma. One can perhaps state it as a principle that when people regularly pay at least a substantial portion of the cost of a public service they will take a more active interest in its management.

The early idea was that schools and especially public schools should be cheap. When improvements were made, even poor schools whetted the appetite of the people for good schools and then for better schools, and their willingness to pay for improved education for their children grew with their experience. A very slight tax, often left to the option of the districts.

was the entering wedge to a low mandatory tax and this to heavier and more adequate taxation. Cities, because of their concentrated wealth and population and the greater need for highly educated men, were more willing and better able to raise taxes than the rural districts. The example of the wealthier cities exerted a potent influence upon their neighbors and from this competition better support for all schools emerged. A special stimulus was also deliberately applied. The states offered aid to local areas on condition that these should levy a specified tax or on condition that the district should out of its own funds maintain the schools for a specified number of months in each year. Such aid then enabled the district to keep its schools open longer or to pay better salaries or otherwise to improve its educational program. By these means the principle was eventually established that property taxation was the most equitable, dependable, and sufficiently flexible method of supporting public education. This essential lesson was learned gradually and at different times in the several states but it may be said to have been well driven home by about 1870. By that time the public schools not only were supported by local taxes and state appropriations but also had become generally free.

Important improvements in the application of the principle have been made. The standards which districts must meet before state aid is granted have been made more inclusive and the levels have been raised. The idea has been accepted that state aid should be used to assure a basic minimum of educational opportunity to every child and also to stimulate the further improvement of the schools. Not the equalization of education but the greatest opportunity for all is the ideal. To assure to each the basic minimum of opportunity, the state may, after the district has met its obligations, guarantee a certain amount of money per child per year. The details of such "foundation programs" vary in different states. The contribution of the federal government, except for the early land grants, has generally been given in support of vocational and technical education.

13. DEFECTS OF THE OLD SCHOOLS

Without the support of an enlightened and united public, the schools of the pioneers could not have become the instruments of democracy. And although this unity of the public was never completely attained, yet as sentiment became more favorable the schools were given increased funds; but they needed, more urgently even than money, systematic organization and scientific administration. These advantages were lacking in the district schools which prevailed in the Jacksonian era.

The district system was widely employed even in the cities until the middle decades of the century and much longer in sparsely settled regions.

By definition it required an individual trustee or a separate board of trustees for each one-room school, and until about 1830 or 1840 almost all schools were one-room schools. To these district boards the broadest powers were allowed. They had the right and duty to levy the school tax, to fix the length of the term, to make all contracts for buildings, repairs, and equipment, to select textbooks, to determine the curriculum, to certificate and employ the teacher, and to settle upon and pay his salary. But they did not always carry out all these functions. The standards of school administration were so low that many of the powers committed to the district boards were neglected through default. And when they were exercised, practice varied from district to neighboring district because each board was an independent agency. One school might, therefore, have a three- and another a six-month term, and similar variations were to be found in salaries, books, and other elements of the school program.

Because the district schools were small and the pupils were frequently not classified the teaching was carried on by individual recitation. True, the graded-class system was coming in here and there before 1840, and skillful teachers in larger schools had been using it for some time, but it was not in vogue where most of the people lived, that is, in the country and small towns. Not only were the schools generally small, but the attendance was very irregular also. Starting in the fall with a few pupils, a school might swell to fifty or more during one or two winter months after the corn had been husked and the hunting season had ended. A single teacher was expected to care for the whole number; and against truancy or simple absence he was helpless. Under such conditions individual teaching, or rather individual reciting, was practically unavoidable.

School discipline was authoritarian, sometimes capricious, and often harsh, even according to the standards of that time. The punishments which included sentence to occupy the dunce block and other forms of school disgrace, and corporal punishment in several forms and all degrees, reached a maximum in expulsion from school. The pupils retaliated by insubordination and by breaking up the school. Edward Eggleston's *The Hoosier Schoolmaster* is not the product of a novelist's imagination alone but was based upon actual conditions. In New England it was found advisable to have cases of flagrant disobedience and violence in schools reported in open town meeting, naming names and giving the facts. There are few boys, said Horace Mann, who will not recoil from such a public report. Repeated and gross infractions of school discipline were to be finally entered upon the public record that the pupil's ignominy might be transmitted to future ages. It was a great satisfaction to Horace Mann to be able to report in 1842 that the number of schools broken up by the insubordination of the pupils was not more than one-tenth of what it

had been for the preceding year; but the record for that preceding year seems to have disappeared. A century ago the district schools were frequently disorderly, badly organized, and educationally ineffective. One should not be surprised to learn that the "better people" refused to send their children to such schools and, therefore, took little interest in their improvement.

The teachers themselves knew no better way. There were no normal schools, teachers' institutes, or summer schools for professional education. Even the necessary academic education for teaching could not be obtained in public schools but had to be secured in academics or colleges. More than one-half of the teachers of Massachusetts and probably a larger proportion in other states were allowed to teach without any examination whatever, and of course without a certificate. Teachers' wages, too, were low, being about on a par with the wages of farm laborers. Accurate statistics are not available but about 1830, men teachers, who "boarded round" with their patrons, received about fifteen dollars per month and women from one-third to one-half of that amount. Farm hands were earning ten to fifteen dollars with board, lodging, and other services such as washing and mending, although in the haymaking and harvest season the wages of day-laborers were higher. Mill hands earned rather more than teachers or farm laborers but not as much as skilled artisans. Henry Barnard in 1842 reported that men teachers in Connecticut received seventeen dollars per month. The wages of the same class in Michigan were slightly below and in Pennsylvania and New York slightly above the Connecticut level; but men teachers in Massachusetts were in 1842 receiving rather more than twenty-five dollars per month. This latter group of figures all represent cash wages. In addition, teachers often received board and room by "boarding round."

Another great and almost universal evil of the common schools was the variety of the schoolbooks that the children brought into the schools. The diversity of textbooks was itself reason enough for the individual methods and the absence of grading. Simply because such action was likely to give offense, school boards did not perform the function of prescribing the books. *The North American Review* in 1841 proposed to solve the difficulty without demanding uniformity by persuading the publishers of approved books to furnish them at reduced prices. The same writer remarked upon the very general absence of apparatus, blackboards, maps, globes, and the means to illustrate the common weights and measures. The schoolhouses, as will be explained in a later section, were often quite unfit to shelter the children.

The natural result of the poor condition of the public district schools followed, namely, the establishment of numerous private schools which

gave instruction in the same branches that the public schools taught or were expected to teach. To these private schools, the minister, the doctor, the lawyer, and others who could afford it sent their children; and in this way they reduced still further the prestige and standards of the common school. Horace Mann estimated that, in 1840 in his state, thirty thousand pupils making one-sixth of all the children between the ages of four and sixteen were attending private elementary schools; and he figured that the cost of teaching those thirty thousand children in private schools was six to eight times what it would have been if all had together attended the common schools. He showed from enrollment figures that by reason of this division of the children and the funds both the private and the public schools were too small for economy, and also too small to provide the socializing advantages of a good school.

All of this was no doubt true and discouraging, but there is another side. Some of the private schools and their teachers served as models and provided leadership for the common schools. Such men as Ebenezer Bailey, George B. Emerson, and G. F. Thayer were far in advance of the district schools and provided excellent examples for imitation; and we know that they were imitated. The proverb about the ill wind applies here yet it remains true that the private schools were both effect and cause of the unsatisfactory condition of the public district schools. The obvious solution was to improve the public schools, to raise them to such a level that private schools could no longer compete with them; and since the resources of the whole public must always be greater than those of a few, this would seem to be a general solution, applicable in a democracy at all times.

14. COMMON SCHOOLS FOR DEMOCRACY

It was in these circumstances that Horace Mann became Secretary of the Massachusetts Board in 1837; and the greater part of his notable achievement was the overcoming of the defects of the district system. But to gain the true perspective upon his work and upon the whole period, it is necessary to see that the improvement was due not to individual effort alone, whether that of Mann or Barnard or another, but to the increasing density of the population, the industrial and commercial revolution, the growing wealth and the rising standard of living of the American people; and it is important to see, secondly, that the reform of the schools had already begun years earlier and was spreading, in 1837, from widely separated centers of influence, such as New York, Pennsylvania, Ohio, Indiana, and Michigan.

Horace Mann carried forward a program which had already made great

progress in Massachusetts under the leadership of James G. Carter and many others. The law of 1827 had been in operation for a decade before Mann took any interest in public education. Gideon Hawley had for a quarter of a century served public education in New York, first as superintendent of common schools and then as secretary of the Board of Regents. State school officers were being chosen in the East and the West as we have already noted, the governors in their messages were urging legislatures to attend to public education, and teachers and citizens were beginning to organize in the interest of this cause. Education had a long road ahead but it was making progress. If we will keep this background in mind we shall be able to understand better the development of the common schools for democracy and the work of Horace Mann.

Mann began to attack along the whole front. His first task was that of informing and educating not only the teachers but the people. Most of the citizens had themselves been educated in district schools alone and knew of no better system of education. Mann traveled from county to county holding educational conventions in the more important towns. He spoke often and secured the aid of other speakers, including John Quincy Adams, Daniel Webster, and Edward Everett, to arouse interest in school improvement. Upon returning to Boston after covering the state for the first time he wrote in his journal that, in spite of weariness and some irritation caused by a few "miserable, contemptible, deplorable" meetings, the tour had been successful. He had on the whole met with unexpected and extraordinary encouragement. This, he wrote, shall be only a beginning. "I confess life begins to have a value which I have not felt for five years," he declared. He also knew the value of printer's ink. He established the *Common School Journal*, writing much of its contents with his own hand, and he prepared twelve annual Reports in which he took up the defects of the schools and proposed remedies.

During his term (1837-1848) great changes occurred in the schools of Massachusetts and the country. In some of these he played an important part. He was a reformer and a prophet but like some other prophets he was without much aesthetic feeling or a saving sense of humor. He had great faith in the common man and a very practical understanding of the value of useful knowledge in such fields as physiology, bookkeeping, drawing, surveying, and applied sciences. For science beyond its more immediate uses, for history, even the history of his own country, for ideas as ideas he had little use in his educational scheme. He was a man of action, a propagandist, and a publicist; but in judging his achievement one must consider not only his own gifts and defects but also the difficulties of his office. For years he was hardly ever free from attack and had to fight to maintain his position. A more sensitive and less devoted man

would have retired from the storm. Mann fought on for twelve years and by that time the amount of money appropriated for schools by the state was double that of 1837, the average school term was longer by a month, teachers' salaries had risen fifty per cent, four normal schools and fifty high schools had been opened, the latter without direct help from Horace Mann, and the private schools were improving in equipment, curriculum, and teaching. Pestalozzian ideas and a growing faith in American institutions and in our national destiny had begun to build schools for democracy.

The Pestalozzian influence was brought in through official reports, accounts by travelers, and the personal contributions of European teachers such as Agassiz or Guyot. To American teachers, Pestalozzi represented two principles. The first was that the child should be governed by love and not fear, that whoever was unable to gain the affections of a child was unfit to teach. The second principle was that lessons should as far as possible be concrete and objective and the child should be led to understand what he was asked to learn.

The *Common School Journal* as early as 1840 published a series of model object lessons. It also proposed the "elliptical method" which had a curious history. According to this Pestalozzian "elliptical" manner of teaching, the pupils had to supply words that were omitted from the sentence which was given them. Thus the teacher, referring to an object before the class, might expect the child to supply the italicized word in, Glass is brittle, or, Water is a liquid. A further step was taken when language books incorporated composition exercises which required the pupils to complete the sense by providing the missing words. Then Ebbinghaus in 1897, and other psychologists who followed his lead, devised "completion tests" using the same idea. Unfortunately several words could often be used to complete a sense, for glass is not only brittle, but also transparent, useful, hard, and so forth. But by controlling the recognized completions as in the item, Northern flowers that bloom in the spring include, 1. asters, 2. tulips, 3. golden rod, 4. chrysanthemums, an objective test could be constructed. Thus a device used by Pestalozzi contributed, after a century of development, to a purpose which was much in his mind and which he called "psychologizing education," or, as we should say, making education scientific.

Along with object lessons, the Pestalozzians, as we have just noted, stressed composition through both oral and written language lessons and with reduced attention to formal grammar. The attack upon formal grammar was not at once successful, and indeed the schools of the early nineteenth century were a grammarian's paradise. Webster, Lindley Murray, and Kirkham wrote several of the most popular school grammars used at

that time. The Pestalozzians also favored oral teaching and an expanded common school curriculum including local geography, nature lessons, drawing and modeling, mental arithmetic, and music. Mental arithmetic was so called because the problems were to be solved without the use of a pencil and the pupil was asked to explain the reasoning he followed in the solution. Warren Colburn's *First Lessons in Arithmetic on the Plan of Pestalozzi* (1821) went through numerous editions. Mental arithmetic became a fad which lasted in some parts of the country until 1890 or later. Perhaps it is unfortunate that it has died out. It seems reasonable that all arithmetic teaching, whether with a pencil or "in the head," should be "mental." Pestalozzi's demands for the systematic teaching of music and a direct approach to music through singing were accepted by those who introduced the subject into the common schools.

How far Pestalozzian ideas penetrated the American educational frontier, and what their permanent influence was, it would be hard to say. The normal schools were few and the institutes, which by 1850 reached a great many teachers, were in session for very short periods. Besides they were likely to be of the "Do as I say and not as I do" variety. Through magazines, teachers' meetings, and all the intangible ways by which ideas spread and especially through textbooks, Pestalozzianism was diffused. Horace Mann judged that Pestalozzi's "influence has been felt where his name even has not been heard."

Professional supervision of education had begun to develop before the Civil War, the grading of schools was under way, and our school system with, in many cases, an eight-year elementary school leading to a four-year free public high school was beginning to take form. Among the notable city superintendents of schools in the nineteenth century were William T. Harris (1835-1908) of St. Louis and William N. Maxwell (1852-1920) of Brooklyn and Greater New York. At first the schools were loosely graded, often into four levels of three years each, and these levels were sometimes called the primary, secondary or intermediate, grammar, and high school grades. Many of the early high schools were three-year schools. The elementary school years also varied, being at one time six in Newark, New Jersey, seven in Rochester, nine in Oswego, and ten in Louisville. In the South and in Kansas City the elementary school was usually a seven-year, and in Maine it was a nine-year, school. The most frequent number was eight.

Closer grading began to develop and the result in the cities was the familiar year by year grading. On this plan each elementary teacher was put in charge of a room in which all the children were doing the same work and aiming to complete a specified year's course in each school year.

In a later chapter we shall see how this iron-clad system of grading, which was called the "greatest invention in education in several centuries," came into conflict with the new ideas of the twentieth century.

With the formation of the new nation, education to overcome sectionalism and to promote citizenship became important. Educational needs became greater also from the rise of industry, the growth of cities, the westward movement, and the increasing immigration. Even before the adoption of the Constitution, land was granted for the support of elementary schools; and the encouragement of schools by the government was demanded by the Northwest Ordinance. The states gave their adherence to the theory of public education but delayed effective action. A favorable public opinion was developing, however. Beginning in the Revolutionary War, many writers, from Thomas Jefferson and other distinguished men to the most obscure, drew plans and declared that without general education no republic could survive. A few, convinced that national education was essential to political salvation, proposed a centralized system on the French model.

Instead of the French system, we introduced the English monitorial plan. All the cities along the coast and inland as far as Cincinnati welcomed the Lancasterian schools because they were cheap. These schools also taught us something about grading subject matter, classifying children, equipping classrooms, and preparing teachers. Although the education they provided was somewhat meager, they helped to convince the people that universal schooling was feasible. Educationally, as in other fields, the time preceding the Civil War was a creative era. Besides the Lancasterian schools, this period introduced the manual labor education of Fellenberg, made a beginning in business, agricultural, and engineering education, developed the lyceum system, which was an adult education scheme, and by modifying the academy created first the high school and then the state normal school.

The most important educational achievement, however, and the most notable reform of that reforming age, was the free, public school system in the northern and western states. There was a great wave of propaganda in favor of more schools and better schools. Teachers' magazines and teachers' associations, promotion societies of citizens, the Workingmen's Party, legislative lobbies, and the favorable section of the press urged the creation of the state school office and the passage of laws for the establishment, support, and administration of public schools. New York led the vanguard, to be followed later by Michigan, Ohio, Massachusetts, and other states. Even with state action, the most serious defects of the private schools were only gradually overcome. But in the more progressive sections of the most advanced states, and especially in the cities, there were better curricula, some use of the Pestalozzian methods, higher salaries, longer terms, and better textbooks in 1860 than in the preceding decades. Education was beginning to aid in forming a more perfect union.

QUESTIONS

1. How may the adoption of the Constitution have influenced education?
2. How may Art. IV, Section 4, and Amendments I, X, and XIV, of the federal Constitution affect education?
3. Why, in your opinion, is there no direct reference to education in the Constitution?
4. What educational provisions are found in the constitution of your state?
5. In what ways did the influence of science, and economic and practical demands affect education in this period?
6. Does "demand" tend to call out "supply" in education, as it does in economic matters; or, more specifically, did the growing need for education in the period 1780 to 1860 tend to promote more and better schools? Illustrate.
7. Why may Amos Eaton be considered one of the most ingenious and original of American teachers? Use the works of P. C. Ricketts for material on this question.
8. How was the cause of public education related to the several tendencies which are mentioned in section eight under the heading "Resurgent Democracy"?
9. If you have access to early teachers' journals, study the issues of two or three consecutive years between 1820 and 1840. What topics and problems are most frequently treated? Have these been solved or are we still debating them?
10. Compare the present school publicity methods with those used a century ago.
11. Why was Pestalozzianism probably less evident in America at this time than in Prussia? Read Horace Mann's *Seventh Report* (1843) on this question.
12. Had education by 1860 succeeded in binding the people together to any great degree? Had it succeeded in doing so at the North?

FOR FURTHER READING AND STUDY

Educational journals began to appear in the period covered by this chapter. They contain a great deal of first-hand information on conditions, ideas, movements, and text-books. The most important early ones are William Russell's *American Journal of Education* (1826), W. C. Woodbridge's *American Annals of Education* (1831), Henry Barnard's *Connecticut Common School Journal* (1838), and Horace Mann's *Common School Journal* (1839). Volume Nineteen of Barnard's *American Journal of Education* contains a study of curricula, especially those of the early high schools (pp. 463, 465-576), and of illiteracy between 1840 and 1860 (pp. 802-835). Educational leaders including Albert Picket, George B. Emerson, Jacob Abbott, A. B. Alcott, Ebenezer Bailey and others can be studied in the *Dictionary of American Biography*. Some of those omitted from the *Dictionary* are included in Barnard's *Journal*.

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18 THE AMERICAN SYSTEM

BY THE CLOSE OF THE CIVIL WAR MOST OF THE NORTHERN states had developed the outlines of their systems of public schools. Progress in that section had not been easy or uniform, but those states generally were committed to the program of developing a state-wide common school. The South had made similar but more tentative beginnings; and there a period not of reconstruction but of primary organization and educational construction paralleled and followed the political and economic phases of the Reconstruction era. Beginning not much before 1873, the state school office, the school tax, and laws for the organization of common schools were generally introduced in the South. That section also demanded a dual system, one set of schools for the white and another for the Negro children, and this made the problems of finance and organization extremely difficult.

In the North the period from 1865 to 1900 was marked by the rapid development of common schools, high schools, and normal schools, the grading of the schools, the expansion of their curricula, the passage of compulsory attendance laws, and a great increase in expenditures for buildings and equipment. The foundations for this expansion, which formed the subject of the preceding chapter, were laid in the three or four decades which came before the outbreak of sectional strife. The kindergarten was introduced into the public system after 1873, and at the other end of the ladder, the state universities, then for the first time aided by regular appropriations, and the new land-grant colleges established through the Morrill Act, completed the system. The junior high school and the junior college developed later, but they are only links inserted into the chain. The system, or rather, each of the state systems when fully formed, comprised the kindergarten, the elementary school, the high school, the teacher education school, and the state university and land-grant college; and it offered the pupils opportunity, at public expense, for a complete education beginning in the preschool years and continuing to the attainment of a graduate or professional degree.

1. PROBLEMS OF THE SOUTH AFTER THE CIVIL WAR

We do not have the space to describe the effects of the war and its terrible consequences. Time was needed to heal its wounds, to revive the spirit of the people, and to lay the foundations for future progress. Four years of conflict had ruined industry and agriculture and demoralized the labor system. The political evils of the congressional plan of reconstruction increased the sectional hatred aroused by war; and the fear of Negro control, the burning issue of mixed schools, and outright opposition to Negro education even in separate schools tended to paralyze the agencies which might have developed public education.

The agencies that first attempted to provide education for the South were private and church associations; and they wrote a chapter that we are likely to forget but ought to remember. Even before the end of the war, northern teachers in large numbers went into the occupied sections and established schools for Negroes or for both races. Others followed after the war until many towns had schools for the freedmen. There were nine thousand teachers in these schools by 1869 and more than half of them were from the North, sent and supported by freedmen's aid societies and educational associations. Two of the latter were the American Freedmen's Union, composed of Unitarians and other religious liberals, and the American Missionary Association, which had been founded by the Methodist and other orthodox churches. The two bodies did not cooperate with each other because the former insisted upon secular and the latter upon religious schooling. The Freedmen's Bureau, which was created by Congress in 1864, was a public agency to provide medical and hospital services, to supervise labor contracts, and to establish schools in cooperation with the private associations. The head of the Bureau, General O. O. Howard, believed that education was the most urgent need of the freedmen.

The emotional force which abolitionism had generated furnished a part of the motive power for the education of the Negroes. They would not really be free, it was held, until they had been equipped to take their places as full citizens of the Republic; but there were also partisan and economic and, as we have seen, religious motives. Many of the teachers came from the centers of abolitionism and former stations of the Underground Railroad. Others who had strong political interests attempted to lead their pupils safely into the fold of the Republican Party. And much of the support came from northern industrialists who hoped to develop markets for their products by educating the freedmen.

The quality of the schools varied, but very poor schools seem to have been the most numerous. The buildings and equipment were inadequate.

At first the pupils were eager and not only children but older men and women attended. The attainment of an education proved to be a long and tedious process, however, and in a few years the enthusiasm declined. The southern whites were at first helpless against the new invasion but they soon became violently hostile to the "Yankee schools." They refused to board the teachers or to rent them buildings for schools and frequently they engaged in real persecution. The attempt to establish mixed schools for the two races, as the American Freedmen's Union tried to do, especially provoked southern ire. By 1870 the northern teachers had begun to withdraw, and by 1873 radical reconstruction had lost the day. There are those who see in the work of the northern teachers and politicians the origin of the public school system of the South, but this contention cannot be supported by sound evidence.

The presidential plan of reconstruction from 1865 to 1867 attempted to enlist the cooperation of the white citizens of the South; but under the congressional plan from 1867 to 1876, the freedmen and northern carpetbaggers controlled the attempted reconstruction. Under presidential reconstruction at least five states had made efforts to re-establish schools; but these attempts were nullified by the radical members of Congress who in 1867 passed the Reconstruction Act over President Johnson's veto. This act formed the southern states into military provinces under martial law. As the state governments were reconstructed, educational clauses were included in the state constitutions, boards of education and state and local supervision were provided, and state appropriations and the property tax for schools were authorized. Much of the legislation was taken from the laws of the same states before the war, although it was made more mandatory and more detailed. By 1870 public school systems had again been created in outline, but the financial difficulties and the hostility of many of the people prevented the effectual administration of the laws.

The extent to which some northern elements were willing to go in order to force educational reconstruction upon the South was shown by the attempt to institute a federal system of education in those states. Representative Hoar, in introducing a bill with this purpose, dwelt upon the failure of the South to provide free public education before the war. The Hoar Bill (1870) was written to apply to all of the states of the Union, but its terms would actually have applied to the southern states only. The bill provided that the President should appoint a state superintendent of national schools for any state which did not provide an approved system of schools for all children between the ages of six and eighteen; and that the Secretary of the Interior should appoint division and local superintendents of national schools for each such state. All textbooks were to be prescribed by the state superintendent and the United States

Commissioner of Education. Local, division, and state superintendents were to report to the federal government. And the schools were to be supported by an annual, direct tax to be collected by federal agents. The bill failed to pass. Superintendent J. P. Wickersham of Pennsylvania, reviewing this bill, in an address to the National Education Association, in 1871, declared that the country could not endure half republic and half despotism any more than it could endure half slave and half free. The Association passed resolutions favoring national aid for schools with local autonomy in educational administration.

There was agitation for national aid for some years after the failure of the Hoar Bill, but without tangible result. It was proposed to create a national school fund from the sale of public lands and to divide the income among the states for the support of public schools. When this plan also failed the Department of Superintendents formulated principles which were embodied in a bill that was introduced by Senator Blair in 1881. The Blair bill provided for the distribution of seventy-seven million dollars to the states in proportion to the number of illiterates in each. This would have given large proportional amounts to the southern states. The bill allowed each state almost complete freedom in the application of its share. The Senate of three successive Congresses passed the bill, but each time it failed in the House. For many years thereafter there was no revival of the proposal to secure federal aid for general education.

Private funds were, however, devoted to this purpose in the South, and these were used to stimulate self-help in certain sections and cities. The first great donation was made by George Peabody who provided two million dollars to be managed and applied by a board of trustees. The first general agent of the Peabody Fund was Barnas Sears who had followed Horace Mann as Secretary of the Massachusetts State Board, and who, therefore, came with large experience in educational promotion; and he was succeeded after some years by an able Southerner, J. L. M. Curry. The income of the Peabody Fund was used to cooperate with state authorities in aiding free public schools for either race, especially in communities where the people were already doing all that they could to help themselves. Since the annual income from the fund was only from ninety thousand to one hundred and thirty thousand dollars, it was deemed better to give considerable help in a few places which could become models for neighboring towns or schools rather than to give small amounts to a large number of places, in which case the effects would hardly be seen. The Peabody Board also followed the policy of aiding normal schools for both white and Negro women teachers. The agents of the Board spent much of their time in developing sentiment for education, allaying antagonisms, visiting schools, and conferring with state departments of education. One of the schools for

teachers that was aided was the Nashville Normal School which with this help developed into the George Peabody College for Teachers, incorporated in 1909. A few years earlier (1898) the Conference for Education in the South had been organized, and the Southern Education Board developed out of this conference in 1902. The General Education Board (1903) and a number of other privately endowed boards cooperated with these agencies.

The conquest of illiteracy, the development of high schools, the improvement of living conditions and health, and the raising of the economic level through a more scientific agriculture were among the leading aims of the southern educational revival. One effort to reduce illiteracy in the country was begun in eastern Kentucky by Cora Wilson Stewart through her "moonlight schools," first established in 1911. Although greatly reduced since then, illiteracy has not been stamped out; the rate per thousand is still high in the rural parts of the South. The public high school also developed slowly in that section. Apparently no southern state had as many as one hundred four-year rural or small-town high schools in 1910. This number has been increased manyfold, the standards have been raised, and the curricula have been greatly enriched. Many consolidated schools have been developed and some states have numerous public junior colleges. But this does not mean that all sections are served by adequate schools. Indeed in the last half-century, educational progress in the South has not everywhere kept pace with that of the rest of the country.

The Negro schools have been improved and they have had the support of some of the great foundations; but even now, except for specially aided schools, they are often in very poor condition. Advanced schools and colleges for Negroes likewise trail far behind the best higher schools and teachers' colleges for whites. The Negro land-grant colleges, which will soon complete their first half-century, have developed slowly because of lack of funds and for other reasons. They have not always received their equitable share of the funds. During 1940, it is credibly asserted, sixteen southern states spent for agricultural extension work among Negroes above two million dollars less than a proportionate division of the funds would have allotted to them. Some of the private colleges, such as Hampton Institute and Booker T. Washington's Tuskegee Institute, have done important work for Negro education. But private agencies cannot carry the burden of the higher education and teacher education of Negroes.

A few figures will indicate the magnitude of the differences which have been mentioned. We shall use as a base the year 1900 which is the middle point between the Civil War and the present. The average school term in the South in 1900 was less than one hundred days as against one hundred and forty-five days in the country as a whole; and in North Caro-

lina it was seventy days a year. Today no state has less than seven months of schooling a year. The showing with respect to teachers' salaries is much less satisfactory. The average annual salaries of teachers in the South actually declined after the Civil War and were little more than half of the national average in 1900. In comparison with northern salaries there has been no improvement since. The Mississippi teachers of both races combined earn less than five hundred dollars a year on the average, those of Arkansas less than six hundred, and those of three other southern states only a little more than half of the national average, which is thirteen hundred and seventy-four dollars (1940). The earnings of Negro teachers are at the bottom of the salary range. Negroes constitute a fourth of the population of the South, and nearly three-fourths of the Negroes of America live in that section. The salaries of the Negro teachers must be doubled and tripled before their schools can command adequately prepared staffs. North Carolina has, however, just passed a law (1944) providing for equal salaries for the teachers of the two races.

If the national government should aid education in the South, this would be only the application of a principle which many states have long applied to their poorer districts. Some federal control, and at least a federal audit of the moneys spent, should doubtless be required. It has been estimated that twenty-five million dollars annually would be required to bring Negro education up to the present level of white education. But many white schools also need the stimulation and the financial aid which the wealthier sections should supply through a federal aid law.

2. THE LAND-GRANT COLLEGES

The land-grant, or agricultural and mechanical, colleges were created as the result of the Morrill Act which was passed by Congress and signed by President Lincoln in 1862. We must distinguish between the state universities and the land-grant colleges, especially since in several states the land-grant colleges have been incorporated in the state universities. The state universities were formed to provide a liberal higher education and preparation for the old professions, especially those of law and medicine, under public, that is state, auspices. The land-grant colleges are also administered by the states but they receive national support; and, as they have developed, they furnish a higher education in agriculture, engineering, and many of the newer professions and vocations. In those states in which the older and newer functions have been combined in one institution, the name state university has usually been adopted but the second group of functions is subsidized by the national government under the provisions of the Morrill and supplementary laws. In such states the name land-grant

college, or agricultural and mechanical college, or state college is not used. We shall briefly trace these developments.

Even the colonial colleges, although they were private corporations, were frequently given public aid in money or land. Such an investment of public wealth was understood to impose a responsibility, but the nature and limits of the obligation were not clear. In the Revolution and intermittently for a period of forty years, several attempts were made by different states to secure control of private colleges and to transform them into state institutions. Such efforts were made in the cases of Yale, William and Mary, Pennsylvania, Columbia, and Dartmouth. At that time all maintained their private status. The last attempt occurred between 1815 and 1819 in New Hampshire and led to the celebrated Dartmouth College case before the Supreme Court of the United States. The decision (1819) reached far beyond the immediate issue to declare that a charter is a contract which a state legislature is not competent to annul. This decision gave legal protection to private property and business agreements in general; and, in particular, it guaranteed the endowments and chartered rights of private colleges. The New Hampshire state legislature was compelled to return Dartmouth College with all its former rights and property to its old board, and the college has continued as a private institution. The decision may have stimulated the founding of private colleges by assuring their continued private status; and it has been asserted that it convinced the public authorities that they would have to establish their own state colleges and universities in order to complete the public school systems. This they proceeded to do.

They had already begun. Nine state colleges and universities had been established by the year of the Dartmouth decision: by Georgia in 1785, by North Carolina in 1789, by Virginia in 1819, and by other states. Twelve more state universities, making twenty-one in all, were founded before the Civil War. Most of them did not at once acquire the later characteristics of state universities. The early institutions were hardly of college grade, were not secular, and were not given regular support by the parent states. The University of Virginia (1825) and the University of Michigan (1837) became the leaders in developing university standards of scholarship and teaching. Eventually, the state universities and the land-grant colleges became what the Constitution of Indiana in 1816 had indicated that they should be, the top rung in our education ladder, or, in the language of that document, the highest stage in a "general system of education ascending in regular gradations from township schools to a State University wherein tuition shall be gratis, and equally open to all." These phrases well describe the ideal of the American state systems of education. It should, however, be noticed with great concern that state universities

and land-grant colleges, by charging fees and often by piling one fee upon another, have come more and more to violate this early principle of gratuitous instruction. This is a policy that cannot be harmonized with the ideals of free, public education.

We turn now from the early state universities to the land-grant colleges. The Morrill Act had a distinct purpose, to provide advanced education for working farmers and mechanics and other members of the "industrial classes." The older colleges and the state universities prepared students for the older professions; the land-grant colleges for scientific agriculture, engineering, homemaking, and the growing industry and commerce of the country. The Act required each state which accepted its benefits to maintain "at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

For this purpose the Act made available to the states, in proportion to population, about ten million acres of public lands. As a result of the gift, almost every state established such a college. They developed slowly at first because they lacked the prestige of older types of institutions and because both the sciences and the teaching of agriculture, home economics, and engineering were not well developed at that time. Not until about the end of the century did they begin to grow rapidly both in size and effectiveness. Nine of them have developed into state universities, and the rest are usually designated as state colleges but many of these are also universities in fact. This latter development was natural because advanced technical and vocational education cannot be imparted except to those who have the necessary basic preparation in the arts, languages, mathematics, and sciences. Meanwhile, these institutions have exercised great influence upon the high schools by preparing teachers, developing new sciences and materials, and enabling the schools to serve the common people's needs. We have fought against early vocational stratification, by means of comprehensive high schools, state universities, and liberal land-grant colleges, by educating future lawyers, teachers, and physicians in the same schools and up to a point in the same classes. The Morrill Act in these and other ways has been a powerful democratizing force that has been felt throughout the American System.

In the Congressional debates on the Morrill Act, it was freely predicted by its opponents that the initial appropriation would be only the first of a series of "raids on the treasury." One may object to the words and to the philosophy underlying them, but this was a true forecast. Not only are the land-grant colleges receiving regular support from the national treasury

but a whole series of supplementary acts, all carrying further appropriations, have been passed. The agricultural experiment stations were created in 1887, and at present the annual appropriations to these amount to an average of about one hundred thirty-five thousand dollars for each state. A "Second Morrill Act" in 1890 provided fifteen thousand dollars a year for the maintenance of each of the original institutions and this amount has now risen to an annual average of ninety-nine thousand dollars for each college. An act was passed to provide seventeen separate land-grant colleges for Negroes in the southern states. Other national acts that may be considered to be supplementary to the original Morrill Act because they are intended to carry out its purposes among those whom the colleges could not reach directly are the Smith-Lever Act of 1914 for the extension teaching of agriculture and home economics, the Smith-Hughes Act of 1917 for vocational education in high schools, and the George-Deen Vocational Act of 1936. The Smith-Hughes and George-Deen Acts carry appropriations of twenty-one million dollars a year for agricultural, home economics, and vocational education, in the states.

That this series of laws would raise many questions is evident. Three of these problems will be mentioned. When the Morrill Act was passed in 1862 it was widely believed that the new colleges could directly reach their object, the teaching of agriculture, home economics, the mechanic arts, and the related subjects, by enrolling future farmers, homemakers, and industrial workers in their campus classes. This was a double error. It was soon discovered that the required teaching methods and means and to a great degree the sciences themselves were undeveloped and often were still to be created. Hence the need for experiment stations, experimental laboratories, shops and research workers to discover and to organize the knowledge and techniques that were to be taught. In two or three decades considerable progress was made in solving this problem and scientific agriculture, home economics, and the several technologies were developing their present forms. In the second place the colleges did not reach the working farmers and mechanics in large numbers. Those who completed the college courses went into technical and government employment rather than to the farm or factory. Hence the need for simplification and the extension of the new practical knowledge to those who would directly apply it. Much of this was done through the publications of the United States Department of Agriculture; and much also through the Smith-Lever (1914), Smith-Hughes (1917), and George-Deen (1936) Acts and the resulting high school and extension teaching, and the county agents, the Four-H Clubs, and other organizations. The whole complex program is an instructive example of popular education and can be studied by educators in all fields with profit.

A third problem concerns national educational administration: if we are to develop a national system of education, what parts in the total scheme are to be played and what controls exercised by the local community, by the state, and by the nation? Only a part of this whole question has been raised by the legislation supplementary to the Morrill Act. The original act provided for national aid to the states for a specified purpose, the foundation of new colleges. But it did not supervise state plans to carry out the purpose. The Smith-Hughes Act for the first time introduced a measure of national supervision over the expenditure of national funds for education. That law provided that the money assigned to a state under the Act must be matched by an equal amount of state funds; and it created a Federal Board for Vocational Education with the power and duty to examine the state programs of vocational education. A state may be required to modify its program to meet the judgment of the Board before it is allowed to draw upon the federal funds. We have called this a measure of national supervision over vocational education. There is evidence that it has not worked to the satisfaction of all. The proper integration of national aid and supervision with state and community interests is a more inclusive problem to which the future may be required to find a satisfactory answer.

3. FEDERAL AID BILLS

Federal aid for vocational and technical education is now a well-established policy. Every year Congress appropriates large sums, more than twenty millions of dollars, for vocational education and an average of nearly a quarter of a million for each land-grant college; and so far there has been little evidence of any undue federal influence. But federal aid for the improvement of general education in the elementary and secondary schools is a different matter. When it is proposed to use federal funds to equalize educational opportunity among the states, the cry of states' rights is raised and the fear of possible federal interference or control is expressed.

The most recent example was Senate Bill 637 which was debated in 1943 but did not come to a vote. The bill would have appropriated annually two hundred million dollars to the states to meet educational emergencies caused by the depression and the war and an additional one hundred million for equalizing elementary and secondary school opportunities among and within the states. The bill was only the most recent form of a series of similar bills which have been before Congress periodically since World War I. The need has long existed and was recognized at least a quarter of a century ago when the Smith-Towner Bill, the first of the series, was introduced. State inequality of educational opportunity arises

from the fact that the states vary in wealth and in the number of children for whom they have to provide. Those states with the highest proportions of children of school age, many of them in the South, are also the states with the lowest per capita wealth.

Federal aid for general education in elementary and high schools would be a means to resolve the paradox indicated above; and this would be merely the application of a principle which many states have long applied to their poorer districts. Such grants would probably lead to a degree of federal regulation. Such regulation should be carefully circumscribed, but if the national government is to furnish money for general education it should have the power and duty to require that the money will be used by the states for the intended purposes. In the past the state governments have amassed power over education; and it is a fair question whether reasonable regulation by federal agencies is less necessary or desirable than state regulation. It is in the local community where citizens and parents can influence the school directly. Such educational democracy as we have—and we have a great deal more than the people of most nations—resides primarily in the local community. But some governmental regulation of public education there must be, and it should probably be distributed between the community, the state, and the nation. The most recent form of the numerous bills for federal aid to reach the floor of either house has been sent back to the appropriate committee (1943). It will be revived. In this matter the nation is moving slowly but it does move.

4. THE FEDERAL OFFICE OF EDUCATION

A third effort by the national government looking toward the development of a more truly national system of education was made by the creation of the Federal Office of Education. This movement also attained its early form shortly after the Civil War. The national government conducts some special schools of its own and renders important services to schools in the states. The Military Academy at West Point, conducted since the early years of the nineteenth century, and the Naval Academy, founded in 1845, are national schools. Many of the departments of the government, such as the Department of Agriculture, carry on extensive educational activities. The Smithsonian Institution and the Library of Congress are national agencies. The Federal Department of Education, later called the Bureau, and since 1933 the Office, of Education, was established in 1867 to promote education by collecting and disseminating information. The first Commissioner was Henry Barnard who had been active in securing the establishment of this agency. Further duties have from time to time been assigned to it. The Office of Education promotes vocational education and

aids in the administration of the funds set aside by Congress for this purpose, conducts investigations including fundamental research studies, issues numerous periodical and occasional publications, and maintains in Washington a national library of education. Upon request the Office of Education conducts educational surveys of national, state, or local scope. An example is the National Survey of Secondary Education whose findings were published about 1932 in a series of monographs. The Office issues about thirty bulletins a year and publishes a monthly magazine, *School Life*, that for the duration of the war was called *Education for Victory*. Its *Biennial Survey of Education* is a primary source on education in the United States for each two-year period, and it also prepares and publishes many studies of education in foreign countries.

5. FROM NORMAL SCHOOLS TO TEACHERS' COLLEGES

Public schools for the preparation of teachers are an essential part of the American System. A few public normal schools had been established before the Civil War, but the period of expansion began with the conclusion of that struggle. In earlier times, it was often considered that teachers were sufficiently prepared when they had completed the work of the school in which they were to serve. Of the principles of school administration, of educational psychology, and of the real functions of the profession which they were entering, they knew almost nothing, and knowing little they were doubtless hardly aware of their professional ignorance. The special schools for teachers have improved these conditions, at least as they relate to elementary and secondary teachers.

Lacking special schools, other means had already been used in Europe to acquaint prospective teachers with their future duties. Handbooks and some forms of cadet teaching were used by the Jesuits, the Brothers of the Christian Schools, Joseph Lancaster, and others. The educational works of the great writers were not very suitable for this purpose because they were not practical handbooks but broad, theoretical treatments. With the rise of systems of public education, teachers were gradually expected to show competence in teaching as well as knowledge and moral character. Professional schools and the modern systems of universal education have developed together. The elementary normal schools of France, from which we apparently derived the name of the American schools for teachers, were first established during the Bourbon Restoration (1815-1830). A normal school is literally one which maintains or sets forth a norm or standard of teaching ability. The American normal school is a native institution, and this applies to the similar schools in other Western countries also. They were all similar in purpose, closely associated with the elementary

schools, and formed of native materials. The one international influence which affected them was the influence of Pestalozzi. His methods and spirit, although variously interpreted, permeated them all.

The American normal school did not come without preparation. It was exactly fifty years from 1789 when the idea of such a school was first proposed by a writer, probably Elisha Ticknor, to the opening of the first state normal school at Lexington, Massachusetts, in 1839. During this half-century many plans and propaganda articles appeared. One of these by Thomas Hopkins Gallaudet in 1825 anticipated the most essential features of the schools as established, including the idea of a practice and demonstration school. Travelers returning from Europe published their observations of such schools in books, magazines, and official documents.

There had also been more concrete anticipations. The academies had long been preparing teachers in the knowledge of the common and more advanced branches and a few had begun to give some attention to the principles and practice of teaching. The well-known schools for girls established at Troy, New York, by Emma Willard and at Hartford, Connecticut, by Catherine Beecher prepared many women for teaching but they did not give courses on methods. A course of three years for the preparation of teachers, in which the common branches were reviewed and special lessons in the art of teaching and class management were given, was instituted by Samuel Read Hall in a private academy in Concord, Vermont, in 1823. He also published his *Lectures on Schoolkeeping* (1829), an elementary work on teaching which was based upon the lessons that he gave in his normal-academy. The report of the principal of the Canandaigua Academy in New York for 1829 shows that prospective teachers in that school were formed into a class to study Hall's *Lectures* until the book had been "finished and thoroughly reviewed." The defects of common schools, the methods of teaching the several school subjects, the making of pens, the government of schools, the construction of schoolhouses, the formation of lyceums and school libraries, and "Pestalozzi and his mode of instruction" were among the topics of the teachers' class in this New York academy in 1829. In New York also an act appropriating funds to promote the education of teachers in the academies was passed in 1827; and this act was followed by a stronger law in 1834. These laws seem to have been the first legislative provisions by an American state for the professional education of teachers. But they fell short of establishing a special institution for that purpose.

The first state normal school was opened in Massachusetts in 1839. It combined instruction in the common branches with work in methods and management and in a practice school. The same year a second, the following year a third, and a few years later a fourth, state normal school were

opened in Massachusetts. The state of New York, influenced by the report of a committee of its legislature upon the Massachusetts schools, abandoned its academy program and opened a state normal school at Albany in 1844. But less than a dozen similar schools were established in all the states before the Civil War. The first thirty years of the schools formed an experimental period; but after the close of the Civil War, state normal schools were established at the rate of about twenty-five in each decade until nearly every state had one or more. Populous states, such as New York and Pennsylvania, each had ten or more so located that the various sections of the state would be served. By the end of the century more than a hundred state normal schools were in operation.

Meanwhile the normal schools developed internally, in number of students, in the qualifications of the staffs, and in their courses of study and equipment. The typical state normal school of 1860 was carried on in a single building which contained the dormitories and also housed the model school. There was a staff of five teachers and less than a hundred students who were seventeen or eighteen years old and whose only preparation was a common school education. The one-year curriculum included reviews of the common branches, methods of teaching, class management, some elementary psychology, and some work with children in the model school. Twenty years later the typical school of 1880 had two hundred and forty students, and the model school was conducted in a separate building. The curriculum had been increased to three years and the staff had grown to ten or twelve. Some academy and college preparatory subjects were usually taught, and this led to an unexpected result. Many of the students were no longer preparing to teach but were in preparation for college instead. The normal school which had evolved out of the academy tended to turn back toward its earlier academic functions, and this tendency continued until the state normal schools became teachers' colleges. But meanwhile other changes had made this development seem natural and indeed necessary. To this we shall come back.

From the first many of the normal schools were led by able men, most of whom have not received the attention which their work for American education merits. Cyrus Peerce, the first principal of the Lexington school, David P. Page, of the Albany school, James Pyle Wickersham, Nicholas Tillinghast, Richard Edwards, and Joseph Baldwin are only a few of the great leaders of that heroic age. With few resources and against great odds they succeeded in building serviceable institutions.

Meanwhile other means were tried to improve the services of those who were already engaged in teaching and who, for the most part, had no professional preparation. One of these means was the teachers' institute which was a teachers' meeting conducted for professional instruction and

continuing usually for a week. The normal institute had the same general character but continued for four or six weeks. Henry Barnard organized a normal institute in Connecticut about 1846 and J. S. Denman of New York apparently first developed the short period teachers' institute. Another medium with the same purpose was the summer school for teachers. One of the first and most famous was conducted by Louis Agassiz on the Island of Penikese on the coast of Massachusetts in the summer of 1873. One with a more distinctly professional purpose was conducted at Martha's Vineyard about ten years later. The universities of Wisconsin, Indiana, and Cornell instituted summer schools about 1890. The Summer School of the South at Knoxville was established in 1902 by Charles W. Dabney and enrolled two thousand students. Thereafter, many other colleges and universities throughout the country began to conduct summer schools and a large proportion of their students were teachers or prospective teachers.

Professional courses for elementary teachers were given in some of the midwestern state universities before the Civil War. These were usually of the normal variety and were administered in special normal departments. The standards were low and the universities, at that time weak, marginal institutions, were competing with the state normal schools. The competition was frequently effective. At the State University of Iowa the teachers' courses for many years had a larger enrollment than the collegiate departments.

When the attendance and the support of the universities increased they abandoned their normal departments, and after an interim of ten or fifteen years, during which they gave no professional work, they began to offer courses for high school teachers in "the science and art of teaching." At the State University of Iowa, which was first in the field, the transition to education courses for secondary school teachers was made in 1873. At the University of Michigan, courses for elementary teachers had been given at intervals from the opening of the university in 1837, but in 1879 a new "chair of the science and art of teaching" was established to prepare school administrators and high school teachers, to develop teaching as a profession, and to promote cooperation between the secondary schools and the university. These purposes acquire special meaning when we notice that they were framed only a few years after the university began to accredit high schools and after the Kalamazoo decision. These matters will be further noticed in Chapter 20. By the end of the century, one-half of the recognized colleges and universities reported that they were teaching education courses, and today almost all are doing so.

As the departments of education grew in size and importance in the large universities, they were reorganized into university Schools or Colleges of Education. Teachers College in New York was chartered in 1889 and

became affiliated with Columbia University in 1898. A School of Education was established at the University of Chicago in 1900 with a famous educator, F. W. Parker, as director. Similar developments occurred in the growing state universities between 1890 and 1920. Bureaus of educational research were frequently established as divisions of the Colleges of Education. At Indiana University this took place in 1915, at the University of Illinois in 1917, and at many other universities in the following decade.

During the same period it became a marked tendency for the stronger state normal schools to develop into four-year degree-granting teachers' colleges. About one-fourth of the previous two- or three-year normal schools had become teachers' colleges by 1920, and one-half of them by 1925. There still are county, city, and state normal schools and a number of private normal schools, but rising standards of certification, competition with university and college departments and schools of education, and rising teachers' salaries after World War I practically compelled the normal schools, especially in the more opulent sections of the country, to raise their facilities and standards to the college level.

With all this progress teacher education is still very defective. One major difficulty is the condition that teachers' colleges, universities, private colleges, and indeed all institutions which prepare teachers are in competition with each other for students and are therefore unwilling to apply any strict selective principles in the admission of students. Nor is there any accepted prognostic scheme which will with certainty or near certainty predict future teaching success. Secondly, there is too little relation between supply and demand as teacher training is now conducted. Under war and postwar conditions there is likely to be a serious shortage and in periods of economic depression a vast oversupply of teachers. This is, of course, due not only to the numbers being graduated from teachers' schools but also to conditions of appointment and terms which the professional schools do not control. The schools do in a large measure control their own courses. It is admitted by almost all, faculty and students, that the courses are too theoretical and that in any given institution there is unjustifiable duplication of content between courses with widely different titles and professed aims. There are, on the other hand, large gaps in the curriculum. Practical questions in school management, in planning lessons, courses, and programs, in guidance, and in personal relations are often treated briefly, theoretically, or not at all. The courses also deal with conditions in large schools and metropolitan centers, although the graduates will spend the first years of their teaching in small schools in rural or village surroundings. Finally, not to make this arraignment too long, there is often a lack of scholarship in the faculties, not only a lack of present knowledge and training but also a lack of the investigative spirit and the scientific scholarly

interest which would fill up gaps and remove present deficiencies. But it would be unfair to end on this critical note. Teacher education has been created in the last hundred years, has improved greatly in quality and scope in the last fifty years, and is still developing. It must continue to improve if it is to serve the future well.

6. COMPULSORY ATTENDANCE

The United States very gradually developed the conviction that an educated citizenry could be developed only if all the children attended school. This conclusion was not accepted until the later decades of the nineteenth century. It was seen that no country had attained universal education or even general literacy by merely setting up schools and encouraging the parents to send their children to school. The church schools, the philanthropic and neighborhood attempts, the Lancasterian schools, and the public schools had all failed at this point. It came to be recognized that only an agency such as the state which includes everyone and which can act directly upon individuals can secure general school attendance, and then only by specific legislation. Some degree of the increased attendance and greater regularity of attendance at school which we have attained is certainly due to the growing recognition of the need for education in modern life; but wherever society has concluded that universal schooling is a necessity, it has been found necessary to enact compulsory attendance legislation in order to attain it. Most of the more democratic states long resisted this necessity and it was not until the latter nineteenth century, about fifty or sixty years ago, that France, England, and the United States began, as Guizot, French Minister of Public Instruction, phrased it, to exercise "this coercive action of the state upon the domestic economy of the family."

Nearly one-half of the states of the union enacted compulsory attendance laws between 1870 and 1890, and within thirty years after the latter date the other half had slowly and somewhat reluctantly followed their example. One state, however, anticipated the rest by more than a decade. Massachusetts as early as 1852 passed a law that embodied the essential features of such legislation; and that law may be used here as a convenient illustration. These features were the age limits, the annual period of attendance required, the necessary exemptions and allowance for alternative instruction, the provision for enforcement, and a penalty for noncompliance. According to the Massachusetts law of 1852, all children between the ages of eight and fourteen years were required to attend school for twelve weeks a year, and for six of the twelve weeks the attendance had to be consecutive. The legal exemptions were specified. Children who were too poor, or too

weak in body or mind, or who were otherwise receiving instruction, or who had already completed the school course were not required to attend. The selectmen and the "truant officers" were to examine the merits of each case and, if any refused to obey their summons, a set fine was to be imposed upon the parents. This law with its easy requirements was a beginning, but even these moderate demands were not rigidly enforced.

The compulsory attendance laws provide an excellent illustration of the general truth that in education the American states while following similar historical patterns are, at any one time, at very unequal stages in the evolution of their program. Every state has now for more than twenty-five years had some kind of compulsory attendance law, but the provisions of the laws are not alike in any two states. Massachusetts and Mississippi, and even two adjoining states like Ohio and Kentucky, differ in the provisions and in the enforcement of their laws. This unfortunate diversity in our compulsory attendance requirements is the natural result of the differences in the past history of the states, in their economic and industrial condition, and in the character and distribution of their people. The industrial states and the new western states were the first to pass such laws: Massachusetts, Connecticut, and New York led in the industrial East; and in the West, Washington, while yet a territory, Nevada, and California, all fell into line before 1875. The southern states were the slowest. The last twelve states, one-fourth of the whole number of states, were all south of the Mason and Dixon line and all but two were east of the Mississippi River, that is, in the "Old South."

The general tendency of the growing legislation has been to strengthen both the compulsory attendance and the related child labor laws and the means of enforcement. By 1890 Massachusetts was requiring seven and one-half months of schooling each year between the ages of eight and fourteen; but apparently no other state then demanded more than five and some only three months a year, while one-half the states still had no laws on the subject. The trend since then has been to lower the age when attendance must begin, to raise the leaving age, to increase the number of months of attendance per year, to stiffen the requirements for work permits, and to improve the methods of enforcement. Ohio now requires children to be in school from age six to eighteen, a twelve-year period extending from the first year of the common school to the normal age for graduation from high school. This is at present the longest period of required attendance in any state. One-half of the states demand attendance for nine years and some for less time.

The laws allow reasonable exemptions. Children who are ill and whose physical-mental condition is such that they cannot profit from school work, or who live at a distance from the nearest school, or who are receiving

adequate instruction otherwise are, in most states, not required to attend the public schools; but the exemptions vary from state to state as the attendance ages and other provisions of the laws also do. The last-named exemption, which permits parents to send their children to private schools, has been challenged. A referendum in Oregon, actively supported by the Ku Klux Klan and adopted March 7, 1922, would have required all children between the ages of eight and sixteen to attend the public schools whenever they were in session. This act would have had the effect of permanently closing all elementary private schools in the state, and this was no doubt the object of the referendum. The Supreme Court declared this act unconstitutional. A somewhat analogous attempt was made, about the time of World War I when a wave of "Americanism" swept the country, to legislate upon what private schools may teach. Laws were passed in several states prohibiting the teaching of foreign languages in elementary schools, both public and private. The Supreme Court declared these laws unconstitutional in the case of *Meyer vs. Nebraska*. In the third place, the state of New Jersey has held that home education cannot be accepted in lieu of school attendance. These cases have both a practical and a historical interest because they mark the present frontier between the power of the state and the liberty of the family in the matter of education and school attendance.

7. SCHOOL PLANT IMPROVEMENT

The state may clearly be taken to assume a corresponding obligation when it passes attendance laws, namely, the duty of providing good schools. It would be against public policy to require children to attend a school where health might be endangered, character corrupted, or learning time wasted. Through the normal schools and colleges of education and by certification and curriculum legislation, an effort was made to guarantee good teaching. Several of these efforts will be more fully treated in the two following chapters.

The health and comfort of the children and the facilities for teaching were also safeguarded and improved by the provision of better buildings and equipment. Here and there some physical improvement had been made earlier, but the greatest progress occurred after the Civil War. A picture of the deplorable conditions which existed is shown by the report of a survey of school buildings, made in New York State in 1841. Overcrowding, lack of ventilation within, of playgrounds without, and of appropriate seating and desks were common. Nine schools out of twenty-two in a single township were maintained in log cabins. Many schools had no conveniences whatever, not even toilets. Drinking water from an open

spring was provided in a bucket, and all the children drank from a common tin cup. The fact that the New York school boards were asked to make this survey is evidence that the bad conditions were attracting attention. The leaders in education, including Horace Mann and Henry Barnard, had recently begun to agitate for better buildings and Barnard's *School Architecture* was several times revised, enlarged, and republished.

Even the cities continued to build one-room school buildings. As the number of children increased another room, laid out exactly like the first, was provided by adding a second story. Cincinnati extended this plan by erecting four-room buildings with two rooms on each floor and a central corridor between them. The Latin and English High School of Boston was erected in 1844. It was three stories high and had six classrooms. As the schools grew and the science of school architecture developed, better plans were used. In 1881, Boston built a new Latin and English High School which followed the plan of the academic gymnasium of Vienna. It was built around a central court, had fifty-six rooms, including a gymnasium and a chemical laboratory, although not the first in the country, and some fireproof construction was used. With the introduction of manual training and home economics into the curriculum, schools began to include shops, kitchens, and cafeterias. Offices and teachers' rooms became standard features.

Conflicts often arise when it is attempted to embody several individually good features in the same structure. Thus in 1867 the principle of durability was adopted in the regulations of the school board of Philadelphia. So obvious a consideration was, of course, not new but its official adoption brought it into conflict with the idea that buildings should be easily extended or adapted to new uses. From the idea of durability, it is only a step to that of fireproof construction. As buildings increased in size the demand for safety developed. This question was tragically emphasized by the Collingwood school fire of 1908 in which one hundred eighty children lost their lives. After this, most states began to pass or to strengthen legislation against fire hazards. The difficulty was increased by the growing height of the buildings. While early school buildings had been low, by 1900 they had risen to three and even four stories above the basement. Thomas H. Burrowes in his *Pennsylvania School Architecture* had protested against this trend as early as 1855. Henry Barnard declared that economy is the only argument for high buildings since "sky costs nothing"; but he added that a schoolhouse is never really economical unless it meets the requirements of health, convenience, and safety, and in all these respects "the four-story plan is decidedly inferior." Since 1900 one- and two-story plans have again become popular.

School furniture has likewise gone through an evolution which paralleled

the school's evolving functions. In the earliest schoolhouses wooden pegs, driven at a steep slope between the logs, supported the writing desk; and there, facing the dark wall, the pupils sat on high benches without backs. Later long benches and desks made by a carpenter and nailed to the floor with cleats formed a second stage. This was followed by the double and then the single desk. Factory-made desks with cast-iron standards were in general use about 1900. These were cheap but they were also noisy and easily broken and they were not adjustable. Movable chairs and desks had been designed before 1850, but they did not come into use until school work became more intimate and informal. The Moulthrop movable desk designed by a school principal of Rochester, New York, popularized the idea; but, even now, school furniture is usually "made for listening."

Not only the furniture but the teaching equipment, maps, charts, bulletin boards, laboratories, shops, gymnasiums, and a long array of other inventions have helped to make our schools qualitatively different from the simple school of the last century. There is a close relation between the building and equipment and the educational efficiency of a school. We should be more healthful and happier in the modern type of schools, but many buildings are not to be so classified. We should not be content until all children have, not luxurious, but healthful, convenient, and educationally favorable buildings, equipment, and grounds.

8. FORMING THE SYSTEM

The school attendance movement was closely related to two parallel developments in the organization of the schools. These were, first, the classification and grading of the children according to their progress in school; and, secondly, the articulation of the schools themselves. By articulation is meant the fitting together of schools and courses so that pupils may go in a regular progression from the lowest to the highest. The public kindergarten, elementary schools, junior and senior high schools, the teachers' college, and the state colleges or state university form such a closely articulated series of institutions because the completion of a properly selected course at each level is the necessary and adequate preparation for undertaking an appropriate course at the next higher level.

Both the grading of the children and the closer articulation of the schools came about gradually in the United States; and they developed together. Evidently when the student body becomes large and the courses of study complex, grading becomes necessary; and the increase in population and compulsory attendance produced these conditions. It was in the cities where the graded school first attained its full development. Conditions varied so widely that the organizing process followed various patterns in

different cities. One or two illustrations will show this. An irregular but very minute grading of pupils was introduced into the Lancasterian schools of New York City where the reading classes were divided into nine stages and the arithmetic classes into seven. This minute division was not retained when the public schools were established in 1853, but yet the public board maintained thirteen grades. The highest of these, however, included some secondary school work. In Chicago, a fully graded course of study was adopted in 1861. The elementary schools of the city were organized in ten grades which together with the high school course, established in 1856, made a fourteen-year system. Kansas City developed a seven-year elementary school which with the high school created an eleven-year system. These examples show the fact that there was no uniformly graded system at the mid-century and for some years thereafter. To this point we shall return when we consider the history of the high school.

Almost as soon as the schools had become fully although variously graded there arose a chorus of opposition to the system. Teachers and citizens protested against the school-machine, the lock-step, and the consequent retardation of children in school and their elimination from school by the rigid grading, the fixed curriculum, and the stiff promotion examinations at the end of each year of work. The opposition really arose, in part, from a new theory of education. Close grading had been satisfactory in monitorial times; it became unsatisfactory later because there had occurred a shift in psychology and educational principles. The new views had been derived from many sources, but they came to us from Pestalozzi and Froebel. They placed greater weight upon the children's interests and needs and demanded a more flexible organization to provide for these individual variations. They helped to prepare the way for the new elementary school which is described in the following chapter.

The outlines of the American System were practically complete by the end of the nineteenth century. It consists of the kindergarten, in many cities, of a practically universal elementary school, of a widespread public high school, sometimes divided into junior and senior schools, of many public junior colleges very unevenly distributed, of teachers' colleges, and of state universities and land-grant colleges. There are also several municipal colleges and universities. The outlines were practically complete by 1900, but the kindergarten in the United States, because of its influence in developing a "new elementary school," and the junior high school and the junior college, because they are mainly twentieth-century institutions, will be treated in later chapters.

The American System is a ladder system. Its aim is to provide appropriate education for all, at all levels, and to require the regular attendance by children at the lower levels at least. The aim is also to provide these op-

portunities at public expense and without fees; and to articulate the schools so that there may be a series of easy transitions from the kindergarten and the elementary school to the professional and graduate studies at the top. Education for teachers, in this system, has been articulated with the rest of the system and is no longer set apart as it was in the early normal schools.

The American System permits the operation of private schools and welcomes their contributions. They have made many important contributions in the past and will doubtless make new ones in the future. The Catholic church and other churches and many secular agencies operate a large number of schools in the United States. Many adult educational services also are outside the public system. Many private organizations of parents, teachers, and citizens, who do not maintain schools, contribute their wisdom and energy for the improvement of the system.

From the administrative standpoint the American System is not yet unified. There is instead a series of state systems, but all of these bear a strong family resemblance to each other. The educational branch of the federal government which would be the logical head of the system has so far concerned itself most actively with technical and vocational education rather than with general elementary and secondary education.

In the last seventy-five years, the public institutions which had grown up independently, each to meet a specific need, were joined together to form the American System, a unitary scheme to provide educational opportunity under public auspices from the kindergarten to the graduate school. Besides this public system there are in all states numerous private schools also. After the Civil War northern efforts to impose a system upon the South having failed, that section gradually developed public school systems on the common plan; but for emotional and financial reasons, they have not attained the standards of some other sections. Federal subsidies, planned to meet southern needs, have been proposed as a means of raising the level of southern education quickly. None of the bills providing such subsidies has been passed by Congress.

The Morrill Act of 1862 led to the creation of an entirely new type of school, the land-grant state colleges of agriculture and the mechanic arts. These, and the complementary experiment stations, have aided in developing the sciences and their practical uses, have furnished aid to farmers, homemakers, and engineers, and have prepared teachers in these areas for the high schools. Meanwhile, the state universities, which originated earlier, had developed and in some states the land-grant college and state university were combined in one institution. Seventeen Negro land-grant colleges were established in the southern states. A series of laws was passed, supplementary to the primary purposes of the Morrill Act, and to achieve its purposes more completely. Among these laws are the Smith-Lever, Smith-Hughes, and George-Deen Acts.

The Federal Office of Education is mainly an information gathering and disseminating, and a promotion agency. But it also administers the allotment of

federal appropriations for education. It does not have the power of some foreign Ministries of Education, but neither do they exercise the democratic leadership of our Office of Education.

The state normal schools began in 1839, but they were not established in numbers until after the Civil War. The earliest normal schools were mainly advanced elementary schools with a few professional courses added; but later they were raised to a secondary school or junior college level and recently they have become degree-granting teachers' colleges.

The public kindergartens and elementary schools, the high schools, the state normal schools and teachers' colleges, the state colleges and universities, and the public junior colleges and special schools were gradually joined together in a sequence which presents an unbroken highway to the student. The formation of the American System also involved legislation on administration and especially on attendance and on school plant and equipment. Other essential phases were the classification of the children, the better articulation of the schools, the elevation of standards, and the distribution of schools among the people in order that educational opportunities may be extended to all as fully as possible. This American ideal is the objective of the American System.

QUESTIONS

1. What do you take to be the meaning of the title of this chapter?
2. What are the chief points of dispute in the interpretation of the educational history of the South?
3. Why was the Hoar Bill an educationally unwise measure? Compare it with current proposals for re-educating Germany.
4. Why did the high school have a slow growth in the South? Find several reasons.
5. If the federal government should subsidize elementary and secondary education, is it probable that federal control will develop? Is state control to be preferred to national control, and why? What is meant by democratic control of education; and why is it to be desired?
6. Which should be most jealously preserved, local control or state control of education? What does history have to say about the defects of each?
7. What important lessons have been learned from the development of the land-grant colleges?
8. Does the early history of the normal schools justify the claim that they were intended as part of the working-class schools while preparatory schools and colleges were intended for professional people? How was this incipient dualism overcome?
9. Why did the early western state universities establish "normal courses" for elementary teachers?
10. What changes in American teacher-education that have taken place in the past do you regard as improvements; and what are its remaining defects? How can these be removed or lessened?
11. Would it be desirable to extend the compulsory attendance requirement in your state, and to what extent? Why? What are the limits of desirable compulsory attendance?

12. Should private schools be abolished as intended under the Oregon law of 1922, or rigidly controlled as in France, or allowed considerable freedom as in most states of the Union? See *Time*, *The Weekly Newsmagazine*, 45 (February 12, 1945), 72, 74.

FOR FURTHER READING AND STUDY

On Negro education and race questions the *Journal of Negro Education*, issued since April, 1932; and on school buildings, the early *Proceedings* of the American Institute of Instruction and the issues in 1831 and later of the *American Annals of Education* should be consulted. Considerable attention has recently been given to the systematic study of school law. The *Colleges and the Courts*, an important work on the law of higher education in the United States, by E. C. Elliott and M. M. Chambers appeared in 1936 and several annual supplements have been added. The list below contains two manuals on school law, one by Edwards, and the other by Hamilton and Mort. The case, *Meyer v. Nebraska*, mentioned in the text, was argued before the United States Supreme Court February 23, 1923, and decided June 4, 1923. See *U. S. Reports*, Vol. 262, pp. 390-403. The Oregon Compulsory Attendance Case, *Walter M. Pierce, Governor of Oregon, et al. v. Society of Sisters, and Hill Military Academy*, was argued March 16, 17, 1925, and decided June 1, 1925. See *U. S. Reports*, Vol. 268, pp. 510-536.

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19 TRANSFORMING THE ELEMENTARY SCHOOL

THE NEW ELEMENTARY SCHOOL OF WHICH WE SHALL SPEAK IN this chapter is the school of the twentieth century and of today; but since our treatment is a historical one, we must recognize that the newest institution of any age is never wholly new. The old elementary school was the school of the three R's and of Whittier's *In School Days*:

Still sits the school-house by the road,
A ragged beggar sunning;
Around it still the sumachs grow
And blackberry vines are running.

Within, the master's desk is seen,
Deep scarred by raps official,
The warping floor, the battered seats,
The jack-knife's carved initial.

The old elementary school was the school of Ichabod Crane and *The Hoosier Schoolmaster*, the school of rote memory and brute strength. With honorable but not very numerous exceptions, the new school began to supersede the old little more than a century ago.

The elementary school of the present differs widely from that of a century ago both in its external relations and management and in its internal conditions and teaching. The transformation began about 1830 and has continued to the present day. It is still continuing and the future will certainly see great improvements in elementary education. Externally, the elementary schools are now organized into a network that reaches all parts of the country. There are new teachers equipped with professional preparation; and professional administration and supervision are provided. The school term has been extended from three months to eight or nine. Systematic methods of financing the operation of the schools and laws to secure the regular attendance of the children are in force. Better buildings and more adequate equipment are provided for child and teacher. These mat-

ters have been considered in earlier chapters. Efforts are being made to draw school and community into a closer alliance and a more helpful relationship. All of this progress has occurred within a century.

There have also been many internal changes, brought about by a new philosophy, new methods of teaching, and a new curriculum. It is these changes that we propose to describe in the present chapter. For the old doctrine that mere literacy, an education in the elements of reading, writing, and arithmetic, is sufficient, there has been substituted the Pestalozzian view that the elementary school, by providing a rich and stimulating curriculum and intelligent teaching, can develop a genuine popular culture even among those whose regular school attendance ends at fourteen or fifteen.

The elementary school has come to draw its materials from the resources of science, literature, history, and the arts. The industrial and the expressive arts have been made to yield their contributions. Instead of merely verbal exercises based upon formal textbooks the schools teach children to investigate, to gather knowledge and ideas from many sources, to think and evaluate, and to take an active part in their own education. For the old rigid grading of fifty years ago a more flexible organization has been substituted. Equipped with tools, shops, kitchens, well-planned auditoriums, medical aid, playgrounds, and libraries, the better elementary schools carry on work of a quality that was not possible in earlier days. S. R. Hall, writing a little more than a hundred years ago, stated, and this was the almost universal fact, that the teacher would not even have a dictionary to aid him.

We shall deal first with the influence which was originally derived from Pestalozzi and then also with those influences which stemmed from Froebel and Herbart. But we must not assume that American education is merely an application of European ideas. Every borrowed idea was quickly changed to fit local conditions and our elementary school is a thoroughly American institution. Our curricula and our methods are our own, but we eagerly and wisely adopted promising suggestions wherever we found them.

There were three Pestalozzian movements, or rather three phases of one movement, in the United States. The earliest efforts to introduce the practice of the great Swiss educator, which center about Joseph Neef on the one hand and the manual labor education concept on the other, were only slightly effective. The second Pestalozzian development, which occurred in the three decades preceding the Civil War, was locally effective but did not spread widely. It was in the period which followed the Civil War that Pestalozzianism made its greatest impression, not only through the object teaching of Oswego but also through nature study. We shall begin with the second of these three periods.

1. THE INTRODUCTION OF ELEMENTARY SCIENCE

Elementary science, object teaching, and nature study were widely introduced after 1860, but there were earlier beginnings in the use of such subjects. The ideas of Pestalozzi had been filtering into the United States since the first decades of the nineteenth century. There were parallel influences such as that of the *Orbis Pictus* of Comenius which was republished in New York in 1810, and the writings of Bacon and Locke. There was a growing interest in agriculture and in the applications of chemistry to practical life. That theories should be based upon facts, that real things should be studied along with words and ideas, and that children should learn to understand as well as remember were doctrines that had long been familiar but the time for their more general application had now arrived. Teachers were coming to realize that children should acquire meanings from words, and that expressionless oral reading is a sign that the passage is not understood. They began to introduce the word or sentence method and to discard the usual alphabet and spelling method in teaching beginning reading. Arithmetic was now to be developed intelligently by the pupil, where before the memorizing and mechanical application of uncomprehended "rules" had been in vogue. In grammar there had been a like slavish adherence to rules, and a more inductive, active, and intelligent method of teaching language and composition came to prevail. A beginning had been made when teachers came to see that pupils cannot learn effectively what they do not understand; and when they began to analyze the pupils' difficulties, to illustrate their lessons, and to provide exercises and applications. This was a considerable part of the Pestalozzian message.

Another part of that message concerned the use of objective materials, concrete things, pictures, and drawings. When Horace Mann returned from Germany he was more than ever convinced that skill in drawing and sketching was a necessary acquirement for teachers. David P. Page condemned mere book-learning in which the pupil was a "passive recipient." The teacher, he said, must inspire the pupil with the desire to know and to find out for himself and not from books alone but also from nature and life. He proposed to have the children observe nature, question their parents, review their own experiences, and also to read books and to report to the class what they had learned. This was a phase of Pestalozzi's doctrine of learning through observation and it came into use in American schools about 1830.

A third Pestalozzian influence of the period concerned the teacher's relations to the pupils and the spirit of the school. By 1830 and 1840 many

educational leaders insisted that the school should be a pleasant and harmonious company. The old harshness was to be outlawed. Only teachers who could inspire love and cooperation were to be considered worthy of their office. There was a close connection between this notion of "discipline" and concrete, intelligible teaching; and both together made some headway in the better schools a century ago.

Teachers were urged to deal with concrete things, to teach orally and visually, and to avoid the tyranny of the textbook. Henry Barnard urged schools to provide "cabinets of real objects as subjects of oral instruction in the field of the pupils' everyday observation and experience." Horace Mann had given many similar suggestions by word and pen. Warren Burton, an early institute lecturer and the author of a quaint little book, *The District School As It Was* (1833), urged that the school should no longer fasten the child to his chair or offer him mere words, "little black images that he can not get his fingers under." This book has recently been reprinted (New York, T. Y. Crowell and Co., 1928, 213 pages). Louis Agassiz, addressing a class at a teachers' institute in Massachusetts, said to the young women before him: "I see before me many bright eyes, but alas! these eyes cannot see!" He then began to explain some natural object, a grasshopper, for example, and every member of the class held a specimen in her hand while she followed his instruction.

The authors of *The School and the Schoolmaster*, which was mentioned earlier, pointed out that a great part of infancy is spent happily in learning the names, properties, and uses of common things. This, they said, should be a cue for the teachers in the school. The teacher should aid the children in doing better what they were already doing and what they loved to do. Listen, they advised, to the questions that children ask, such questions as these: Why do the birds come back in the summer? What makes the rain? Why does the smoke go up in the sky? They said teachers should be familiar with elementary science so that they could answer such questions and could teach children to observe correctly, to draw, and to measure. They gave a list of sixty subjects for lessons in easy science, agriculture, physiology and health, and the useful arts.

The Massachusetts normal schools at Westfield and Bridgewater began to build up science collections and to employ demonstrations and object teaching. This Pestalozzian drift was supported by the natural interest of their rural pupils in the problems of the farm and the household. These normal schools developed what they called the "analytic, objective method" by which pupils were taught to observe, to analyze, and to think. John W. Dickinson (1825-1901), who became the secretary of the Massachusetts Board of Education, had been connected with the Westfield State Normal School for a quarter of a century and he believed that this school was

"the first to show that all branches of learning can be taught by the same objective method."

This early form of elementary science and nature study is also revealed by the children's literature of the time. Elementary science books and books giving common-sense information about nature, rocks, plants, animals, and the farm were prepared for use in school and home. Such titles as *The Young Chemist*, or *Familiar Lessons* in one or another subject field, were numerous even twenty years before the Civil War. An example is David Blair's *Catechism of Common Things* which was in its fifth edition in 1825. Most of the books of this type were by undistinguished authors. One of the writers, however, was David A. Wells, later a prominent economist, who had studied under Agassiz and who in his earlier years wrote *Familiar Science* and the *Science of Common Things*. The flood of such nature and easy science books can only be suggested here but even this brief notice shows that in the literature for children and schools a scientific current was then beginning to flow beside the older moralistic and patriotic streams. The Pestalozzian influence, as we have already indicated, was also seen in the school subjects of arithmetic, geography, and music. The growing interest in nature and in children led to the development of inductive and object teaching. We shall now show that these sound early methods were perverted by the introduction of a less flexible and less natural method, the Oswego system of object teaching.

2. THE OSWEGO SYSTEM

The highly formalized scheme of object teaching which was developed and spread by the State Normal School at Oswego, New York, was an importation from England. At least two earlier efforts to introduce it had been unsuccessful, one by Horace Mann, who in 1840 had published some of the English object lessons in his *Common School Journal*, and another by A. J. Rickoff, the superintendent of the Cincinnati public schools. Both efforts failed. But a similar attempt by Edward A. Sheldon, founder of the Oswego Normal School, was successful. Sheldon was an enthusiastic promoter for whom difficulties were steppingstones. Having already established a "ragged" school for Oswego's neglected children and served as superintendent of schools in Syracuse, he was in 1853 recalled to a similar position in Oswego. There he established Saturday classes for the teachers and these developed into a training school. He felt that the schools were too mechanical and that the children were asked only to memorize, not to observe and reason. The work, he thought, should be more objective. "For this purpose," he wrote, "we wanted collections of objects of all sorts, charts of color and form, natural history, pictures, objects for teaching

number, and reading matter in quantity, suited to the ages of the children."

In his search, Sheldon in 1859 visited Toronto where Egerton Ryerson, the well-known Canadian educator, had placed a full set of the lesson materials and teachers' guide books from the English Home and Colonial School Society. These materials, it should be noticed, were not in use and had not been introduced into the Canadian schools; but to Sheldon they seemed to be exactly what was needed.

By convincing his board of education that the venture would "not cost the taxpayer one cent" he was permitted to bring an English critic-teacher, Margaret E. M. Jones, to Oswego to introduce the Home and Colonial version of Pestalozzianism. Sheldon secured the necessary one thousand dollars by dispensing with the services of one teacher, by charging the teachers a fee for the lessons which Miss Jones gave, and by soliciting contributions from his teachers. Miss Jones remained only one year, but that was sufficient time to establish in Oswego the formal object teaching which she sponsored. Because it was formal it was easily transmitted by means of outlines, lesson plans, and manuals. Object teaching became a fad. In 1866, Sheldon was able to secure recognition of his training school as the second New York state normal school. The first had been established at Albany twenty-two years before.

Oswego graduates carried its system into nearly every state during the twenty-five years (1861-1886) when it was in favor. They were to be found in large numbers in New York and all the states north of the fortieth parallel, but few entered the Old South or the West. Other normal schools also spread the system including those at Trenton, Kirksville, Terre Haute, and Winona. But object teaching was not approved by everyone. In the methods of the Home and Colonial School Society, and of Oswego, the objects were such things as leaves, colors, and geometric forms. These were selected and arranged by the teacher, and frequently there was only one object before the class. It could not be handled and could hardly be "observed" by each child; and it was even more unfortunate that no real motive for dealing with this object was established in the child's mind. The description was abstract and usually confined to the number, shape, size, color, and the parts of the selected objects. Stilted language was standard in the Oswego system, which had copied the errors rather than the inspiration of Pestalozzi. Most important of all, the teachers often knew too little science to deal intelligently with the materials they employed.

The faddism of the Oswego movement seems to have irked Henry Barnard. He remarked that educators had for a quarter of a century urged that school work should be based upon the pupils' own observation and experience. Now, he said, within two years (1860-1861) a host of model object-lesson books have been published with such titles as *Manual on*

Object Teaching, Lessons on Objects, Primary Object Lessons, Outlines of a System of Object Teaching, and Child's Book of Nature. The danger now, he said, is that teachers will copy the methods of some manual without understanding the principles, without considering the ages and attainments of the pupils, and without adapting the work to the pursuits of the people. Object teaching, said Barnard, can be made as verbal, mechanical, and monotonous as any other teaching. And it often was.

3. NATURE STUDY

While the British object lessons were spread from Oswego, the older and more informal study of nature continued in many schools. William T. Harris prepared a syllabus of oral science lessons for the schools of St. Louis. Agassiz continued to teach until 1873 and during his last year he conducted his famous summer school at Penikese. Two years later Francis W. Parker began his work at Quincy, Massachusetts, which is treated below and H. H. Straight, who is sometimes regarded as the founder of organized nature study, had been a student at Penikese and was to be a teacher under Parker at Chicago. Several of the normal schools were carrying on the earlier tradition which has already been described. New influences also came into play. The kindergarten and child study which had begun independently reinforced each other in opposition to formal object lessons and in favor of more active and more natural methods. A wave of interest in the rural school, which was set in the midst of nature, and in the improvement of agriculture fostered the new movement. Out of all these tendencies a new nature study which greatly improved elementary instruction was born.

Nature study is not altogether easy to define. It is allied to the older natural history. It is simpler and less formally organized than science and attempts to consider the children's interests more. The sciences of that day often concerned themselves with classification and names and with the structure of animals and plants. They emphasized laboratory methods and dissection and paid little attention to the questions children ask about natural objects. Nature study, which tried to correct these trends in elementary instruction, was directed toward a more informal science. It dealt extensively with living things, both plants and animals, and with their environment and it attempted to answer the children's questions somewhat as an old field naturalist would have done.

Several phases of nature study may be distinguished. One was a humanistic and literary interest in nature, its color and poetry, its seasonal rhythms and the interdependence of its living forms. This type had a tendency to become a sentimental study rather than a scientific one. The practical

study of nature formed a second phase, and here the purpose was to introduce the children to agriculture, home economics, health studies, and the conservation of natural resources. And, thirdly, there were those who used nature study as an introduction to science, or as a kind of general science; and books proposing to deal with physics and chemistry or with elementary biology by homemade apparatus and simple experiments were called nature study books. Although the subject is hard to define, it will be most helpful to think of it as elementary school science and as closely allied to the natural history of earlier times.

If we leave that earlier period out of consideration, Henry H. Straight (1846-1886) may be regarded as the founder of nature study. He was born near Chautauqua, New York, grew up on a farm, and began to teach at sixteen. As a student at Oberlin, then still in its frontier stage, he became interested in languages. To earn money to study these subjects in Germany, he took a position as principal of the public school in the small town of Galena, Ohio. Experience in teaching object lessons led him to substitute lessons in elementary science and natural history; and his whole life program was changed by his success and by the growing conviction that scientific knowledge and training were essential in fitting children for life. Instead of going to Germany, he continued his studies at Cornell University where he received a strong scientific and educational impulse.

After a year as principal of a new state normal school at Peru, Nebraska, Straight resigned to take the more congenial position of science teacher in the same school. There he developed a plan of education based upon science and the industries, a scheme which he attempted to work out more fully in later years. The following year he was first on the list of Agassiz's students at Penikese (1873) and he continued to work with N. S. Shaler and other Harvard scientists, and at Cornell University, until in 1876 when he became professor of natural science at the Oswego Normal School. He had at Peru turned the basement of the school into a number of laboratories; and Agassiz had made it clear that it was feasible to handle large numbers of students in experimental work. But at Oswego he attacked another problem. He tried to transform the old formal object teaching into the study of living plants and animals in their natural habitat. He believed that laboratory work was not suitable for children and instead substituted nature study, especially field excursions to the woods, swamps, and lake shore, where his young naturalists used the pencil and brush rather than the forceps and scalpel. Although some members of the Oswego staff, Hermann Krüsi, for example, valued his work, he was not able to make his ideas prevail. The decadent object lessons had become too firmly entrenched. Meanwhile, at the Martha's Vineyard summer school for teachers where he lectured, he came under the notice of Francis W.

Parker who in 1883 invited him to the Cook County Normal School. He accepted and there he spent his remaining years. Parker credited his own use of the principle of correlation to Straight, who stressed the connections of natural science with geography and other subjects. This principle, independently developed by Straight, was an outgrowth of his great theme, the unity and interdependence of all nature.

After Straight's death, one who is even better known, Wilbur S. Jackman, was chosen to succeed him. Jackman's *Nature Study for the Common Schools* (1891) was a teachers' guide, not a book for pupils although, since it was composed mainly of questions on direct observations and experiments, it could have been used as a laboratory and field manual. The "lessons," drawn from nine different sciences, consisted of the regular gathering of materials and the discussion and systematic arrangement of them, followed by the reports of the pupils' observations. The subjects were arranged in a month by month series throughout "the rolling year." Like Pestalozzi, he placed great stress upon the expression of the children's observations and conclusions; and he proposed varied reports by means of gestures, music, modeling, drawing, painting, as well as oral and written language.

Before the end of the century the nature study movement had spread far and many higher institutions had begun to prepare teachers for work in this field. Cornell University and the Illinois Normal University were prominent in the promotion of the agricultural phase, and Clark University and the University of Chicago were also important centers. Interest in nature study for farm boys and girls grew out of the severe agricultural crisis of the early 1890's when many farm families became destitute and the agricultural colleges considered plans for the relief of the rural population. It was agreed that the improvement of the rural school was an essential step in the program and that one means for the improvement of the rural school was nature study pointed toward farm life, and farming as a vocation. Among the leaders in nature study at Cornell were Liberty H. Bailey in the administration of it, Anna B. Comstock in the preparation of materials, and John Walton Spencer in the development of nature study clubs. Bailey was also important as a writer. In his *Nature-Study Idea* (1909) he declared that, if anyone were to plan schools for a rural section which had no schools of any kind, he would certainly include something about plants, animals, fields, and people. He could not conceivably plan purely academic rural schools in which the work of the children had no visible connection with the habits of the people and the immediate needs of the community. Yet the purely bookish elementary school was not only conceivable; it too often was a fact.

One of the outstanding books produced by the entire movement was

prepared at Cornell by Anna B. Comstock. Its title is *Handbook of Nature Study*. Originally issued in 1911 as an outgrowth of her leaflets for teachers, this work attained its twenty-fourth edition in 1939. In that form it contains 900 pages, 1100 illustrations, and an extensive bibliography. Part One is pedagogical, dealing with the teaching of nature to children. The remainder of this important work treats of animals, plants, earth, sky, and weather, and presents materials from which exercises and courses of study may be developed by the teacher. While it is a teachers' book it can easily be read by upper-grade children. A more vocational presentation of the same idea developed in the black-soil country of the Middle West. This was the *Practical Nature-Study and Elementary Agriculture* (1909) by Coulter and Patterson of the Illinois Normal University. The title was accurately descriptive, for it deals with trees, insects, weather, weeds, pollination, plant breeding, and rural school gardens. "In an agricultural community," the authors said, "the lessons must be primarily agricultural." The general movement also gave rise to a national and many local nature study societies and to magazines such as the *Nature Study Review* which was started in 1905.

As formulated by Straight, the new subject developed as a reaction against object lessons. It was clear to him that nature study should be elementary science and this was in the main the view of Jackman also. In Jackman's writing one may notice the influence of the kindergarten and the child study movement. To others nature study appeared to be especially appropriate for the rural school and the children from the farms, and had special importance for agriculture and life on the farm. By 1900 a more sentimental phase had begun. A critic of this "effeminate" nature study put his judgment in these words: "Nature study is science. The idea that it is not science leads to serious results. The responsibility for accuracy seems to disappear and much of the nonsense and sentimentalism that has brought discredit on the subject is due to this fundamental error." There can be no doubt that where nature study was seriously pursued, either as a subject with practical applications to agriculture or as an easy natural history introduction to science, it was a valuable addition to the work of the schools. It was easily possible to link it with geography and with elementary handwork and this was often done.

4. THE KINDERGARTEN IN THE UNITED STATES

The founder of the kindergarten considered his system and philosophy to be of general application to education at all levels and not to be confined to the education of small children; and in the course of time the new institution has come to influence the work of most of the elementary

grades. Perhaps the first Froebelian to work in the United States was Caroline Frankenberg who came to Columbus, Ohio, in 1838. According to a family tradition which it is difficult to verify, she in that year established "a school based upon the active interests of children." This title which had been chosen by Froebel for his new institution was discarded in 1840 when he thought of the name, "Kindergarten." At any rate, Caroline Frankenberg had been in the Froebel circle for some time before coming to America; and after a year in this country she returned to Dresden to help her brother in developing the kindergarten there. Her brief early American visit had no influence.

A notice of Froebel's "infant-gardens" was printed by Henry Barnard in his *American Journal of Education* in 1856. He described the Froebelian gifts and a kindergarten which he had seen at the London Exposition. He declared the new institution to be "by far the most original, attractive, and philosophical form of infant development that the world has yet seen." At the same time (1855) Mrs. Carl Schurz opened a small family kindergarten for her own child and the children of her neighbors at Watertown, Wisconsin. A native American, Elizabeth Peabody of Boston, opened a kindergarten in 1860 upon information furnished by Mrs. Schurz. In her own opinion this effort was a failure and she left for Germany to study the kindergarten in its native land. She later declared: "It was Emma Marwedel who in 1867 first introduced me to Froebel's genuine kindergarten in the city of Hamburg and inspired me with the courage to make the extension of the kindergarten in my own country the main object of my life." In this decision she persevered. The kindergarten became for her a sacred cause. By editing magazines, writing books, and delivering addresses she became an important propagandist for the new education.

When Elizabeth Peabody returned from Germany in 1868, she found that a school to prepare teachers for kindergartens had just been established in Boston by Matilda and Alma Kriege. Mary J. Garland who became another kindergarten promoter was educated in this school; and she and her own pupils found a patron in Pauline Agassiz Shaw who aided not only the kindergarten but also the manual training, vocational guidance, and other educational movements.

The foundations for the spread of the kindergarten in America were laid by the schools for kindergarten teachers which the disciples of Froebel established here, by the Kriesges in Boston (1868), Maria Boelte and John Kraus in New York City (1872), and Emma Marwedel in Washington, D. C. (1872). All of these were German immigrants who had been prepared by the immediate pupils of Froebel. Maria Boelte (1836-1918) was the most successful of all and in the course of a long life she sent out about twelve hundred kindergartners from her school. With Dr. Kraus

she published an important early book, *The Kindergarten Guide* (1877). William N. Hailmann (1836-1920) came from Switzerland and was judged by G. Stanley Hall to have been "by far the most eminent of all men in this country devoted to the interests of the kindergarten." Hailmann made the well-known translation of Froebel's *Education of Man* in 1887.

The crucial step of incorporating the kindergarten into the public school system was taken in St. Louis in 1873. Before that the kindergarten had been a private institution promoted by philanthropists, churches, and welfare agencies. In New York the Ethical Culture Society under the leadership of Felix Adler established a kindergarten in their school for workingmen's children. Mrs. Shaw supported thirty or more private kindergartens in Boston until the city finally took them over. Great industrialists sometimes supported the new institution in the belief that it would make children more skillful with their hands and thus develop skilled workers. Many were supported as a means of providing social relief and moral training. But in St. Louis the kindergarten was made a part of the public school system. The initiative was taken by Susan E. Blow (1843-1916). Having secured the support of Superintendent Harris, she prepared for her work under Maria Boelte and opened a training class and one kindergarten in a public school building. By 1880 there were fifty-two in the schools of the city.

The public kindergarten spread slowly at first but more rapidly after 1885. As early as 1880 there were reported to the United States Bureau of Education more than two hundred public kindergartens which enrolled nine thousand children in fourteen states. Five years later the numbers of the institutions and their pupils had doubled and were found in thirty-five states. Between these two years Milwaukee, perhaps influenced by the large German population, sent a committee to study the St. Louis arrangements. Upon receiving a favorable report from its investigators, that city introduced the new institution into its public school system. Boston established the public kindergarten in 1888 by incorporating the large number which had been privately supported in the city. This rapid progress continued at an even greater rate throughout the cities of the country until the early nineties. As a result of the financial depression of 1893 many were again abandoned. Then and in every financial crisis since, the kindergarten has been one of the services which school systems have sometimes been too easily persuaded to give up. The kindergarten has never become common in the rural sections; but in the cities it has maintained itself fairly well. According to recent official figures, between one-fourth and one-third of all five-year-old children are enrolled in the kindergarten and the proportion is slowly increasing. This does not support the opinion of

some otherwise well-informed persons that the kindergarten is losing in popular estimation. It is, however, true that it is not getting enough financial support. The classes are too large, the salaries too small, and the space and arrangements often inadequate.

When the National Education Association in 1884 organized a kindergarten department, William N. Hailmann became its first chairman and was several times re-elected to that position. The topics considered by this department provide an index to the questions which interested kindergartners in those pioneer days. Some of the most frequent topics were the following: child study, education for parenthood, how to fit the kindergarten into the primary school system, handwork and industrial education, and the physical development and health of small children. Consider the third topic. The integration with the elementary school has not always been successfully carried out. The kindergarten has often remained apart. Where integration has taken place, its methods have often to a startling degree modified the primary school. Even where the kindergarten remained apart, and in spite of its insecure position in American systems, the kindergarten influence has been one of the main agencies in the development of the new education.

5. ELEMENTARY HANDWORK

The close connection between simple work with the hands and child development was emphasized by Froebel in his writings and in the kindergarten. And he carried on this manual activity into the higher grades of the school. He had in mind not mainly the economic results of handwork but its educative and expressional value. He wrote: "The debasing illusion that man works, produces, creates, only in order to preserve his body, in order to secure food, clothing, and shelter, may have to be endured [apparently because it was so common and widespread] but it should not be diffused and propagated." He meant to use work and play to cultivate the mind and elevate the spirit of man. A man's vocation, it seemed to him, could offer no difficulty to one who was generally well-educated.

This view was accepted by some of Froebel's American disciples. Felix Adler in founding the workingmen's school said: "We are seeking to apply the principle which ought to be at the foundation of every modern scheme of education: namely, that, as experiment conjoined with observation is necessary to the discovery of truth, so object-creating must supplement object-teaching in the rediscovery of truth which it is the purpose of all education to facilitate. Therefore, work-instruction is not something outside of regular instruction; it is an organic part of regular instruction.

. . . It becomes the means of making the hand a wise and cunning hand by putting more brain into it. But, on the other hand, it makes the brain a clear and vigorous and enlightened brain, by giving it the salutary corrective of the demonstrations of the hand." Adler's views were later supported by Wilbur S. Jackman, F. W. Parker, and by many of the exponents of kindergarten theory who combined observation and object study with drawing, painting, modeling, and building.

One form of manual work was brought into the schools from Sweden, where it was called *sloyd*. *Sloyd* means sleight-of-hand or skill and as introduced here it was a simple form of woodworking. The *sloyd-knife* was the most important tool, and the pupils made common articles such as pen-holders, picture frames, racks for holding various objects, or wooden mixing bowls. All objects were to be well-designed but without meretricious ornamentation. They were to be useful, made wholly of wood, and finished by the pupils themselves. *Sloyd* was introduced into the schools of Boston under the patronage of Pauline Agassiz Shaw by an able teacher from Sweden, Gustaf Larsson, and by others elsewhere. About the same time domestic activities, such as sewing and simple weaving, drawing, woodworking with carpenter's tools, and wood turning on the lathe were introduced. Samuel Love, superintendent at Jamestown, New York, was one of the first to develop a full course of such activities. Teachers equipped to carry on such work were prepared by the New York College for the Training of Teachers, later Teachers College of Columbia University, and by some of the land-grant colleges of agriculture. Even at that time construction work was sometimes connected with nature study and geography.

Another group also connected with the kindergarten movement stressed vocational or prevocational purposes. Manual training introduced after 1876 frequently had this technical purpose. It was employed in engineering schools and colleges of agriculture and was taught in the new manual training high schools. But some professed to see in such work, even down in the kindergarten and the primary grades, an opportunity to prepare more skillful apprentices; and with this in mind a high official of the Standard Oil Company gave a large sum for kindergarten promotion. The vocational argument was chiefly employed in the effort to promote manual training in the high schools and beyond.

Elementary handwork was more correctly conceived as a new educational means and an opportunity to develop the capacities and the interests of children. Children love to plan and to execute if proper opportunities are not denied them. In the process of creating and constructing objects of use and beauty they acquire skill, knowledge, and valuable new

interests. They grow, they become better educated, and they learn to understand the material and the social world. These were the purposes of elementary handwork.

6. CHILD STUDY

The call to study the child had come from Rousseau. "Begin," he said in the preface to the *Émile*, "by making a more careful study of your scholars for you may be sure that you know nothing about them." This was sound advice, but as in so many other cases, he was unable to provide an example and his advice went unheeded. Yet it was not altogether lost for Pestalozzi wrote his *A Father's Journal* describing the development of his son, Jean Jacques Pestalozzi. Charles Darwin, without having Rousseau in mind, prepared *A Biographical Sketch of an Infant*, and the French writer Taine gave a similar account. More important for future child study than the *Biographical Sketch* was Darwin's doctrine of evolution and the closely connected interest in individual differences.

A beginning in child study was made in the United States in 1883 when G. Stanley Hall published his work upon "the contents of children's minds upon entering school." The research upon which this paper was based was carried out by some teachers of Boston and vicinity with the financial support of Pauline Agassiz Shaw, a generous promoter of educational innovation in that period and region. The teachers asked beginning school children individually a series of questions which Hall had prepared. There were about a hundred items covering their knowledge and understanding of common things, what they knew about plants and animals, about number, about games, what things they could do, and what were their ideas about religion. "The results seemed almost to suggest a new science of ignorance." Teachers learned from this study that there was very little that children of six could be safely assumed to know. A similar study with similar results had been made by a well-known Herbartian educator, Moritz Lazarus, of Berlin. And the publication of Hall's paper led many other Americans to make similar inquiries. Hall's results may be conveniently found in his *Aspects of Child Life and Education*.

The peak of the child study movement came after 1890. In the two decades after 1895 about two hundred investigations were carried out by Hall's students at Clark University alone, and many hundreds of others were completed elsewhere. Various methods were used, the questionnaire, the child biography, and the controlled experiment. The results were very uneven. Millicent Shinn, using the biographical method, produced her classical *Notes on the Development of a Child* (1893), which was also

published in popular form as the *Biography of a Baby* (1900). Many investigations were published in the *Pedagogical Seminary*, the *Child-Study Monthly*, and the kindergarten magazines. Many child study organizations were formed. One of the most active of these was the Illinois Society for Child Study (1894) which enrolled F. W. Parker, John W. Cook, and John Dewey among its members. A close connection can be made out between this society and the Herbartian movement which is treated below. Child study was not confined to the United States, having originated in Europe as we have seen; and it enlisted such men as Sully in England, Binet in France, and Meumann in Germany. It was in fact a phase of the new study of educational psychology. In 1896 Lightner Witmer at the University of Pennsylvania established a "psychological clinic" for the study and remediation of the handicaps and maladjustments of children. The child study movement called attention to the defects of the old school, the rigid grading system, the faulty school equipment and furniture, the formal teaching, the narrow curriculum, and in general the failure of the schools to adjust their work to the needs of the children. The later work of Stein and Piaget, of Watson at the Phipps Clinic in Baltimore, of Bird T. Baldwin at the University of Iowa, and currently of Arnold Gesell at Yale University was not uninfluenced by the development of child study.

7. THE QUINCY METHODS

The Quincy methods were named after a suburb of Boston where Francis W. Parker (1837-1902) was superintendent of schools in the latter seventies. The methods of teaching favored by Parker at Quincy and afterward were based, like the Oswego system, upon observation, and Parker acknowledged his indebtedness to Sheldon; but they were also influenced by the new movements which we have just been considering, nature study, child study, and the kindergarten. At Quincy, observation was to lead to further experience because the classes were to be more active and informal and the materials were to be more appropriate and interesting to the children than in the Oswego object teaching. And Parker succeeded in this. The textbook-recitation routine was overcome; but in steering away from the precipice of formalism, the Quincy schools sometimes sailed close to the whirlpool of triviality.

A product of the American frontier democracy, Parker was to a great degree self-educated. Except for the Civil War period when he fought in the Union armies, he had been from the age of sixteen a teacher and a schoolman. "I do not remember the day," he once said, "when I did not believe that I should be a teacher." From the war, which made him a

colonel, he gained a fierce hatred of war and militarism. From the hardships and narrow opportunities of a pinched boyhood in rural New Hampshire he derived his love of nature, his interest in the common people, and his militant democracy. He was a part of the developing new education at home but for three years he also studied at the University of Berlin (1872-1875).

The "selfish aristocracy" which attempted to subject the common people to the domination of the few was Parker's greatest enemy, and he never ceased to assail it. He hated the dual educational systems of Europe and all schemes to confine people in fixed classes and by class education to keep them in ignorance and thereby in subjection. He held that in building a democracy we must begin with the children; we must give them both freedom and responsibility; and, therefore, we must make the school a working democracy. And the freedom of the child, in his view, implied the freedom of the teacher; but with the possible conflict which is implicit here he did not deal. There were to be no fixed course of study, no numerical records, no inflexible classification of pupils. Instead of report cards the children's drawings, compositions, and models were themselves taken to the parents. The "social factor" he declared is the greatest factor of all, more important than the subjects taught, than the methods, than the school itself. That which children learn from each other in play and work is the highest that is ever learned. Altogether in the spirit of Lincoln, he insisted that in school the strong and clever must serve the weak, for the sake of the social education of the strong and not only that the weak might be served. In democracy, he held, there can be neither masters nor slaves.

It appears, however, that Parker's analysis was inadequate. He nowhere dealt with the basic economic questions, nor with race, nor apparently did he realize that the lessons learned in a school democracy may be all too quickly forgotten in the stress of practical life and business. Like Horace Mann he hoped for an easy victory over the devils of our modern society. If such criticism, fifty years later, is easily made and unfair it is nevertheless important that we make it in order that we may see our own duty more clearly. Our duty is to attempt to use the school more effectively to build democracy; and we shall not be able to do so if we ignore economics, racial discrimination, and the power of ordinary human selfishness.

Parker returned from his European studies in 1875 and was chosen superintendent of schools in Quincy, Massachusetts. The changes which he made in the elementary schools of the city are indicated in a well-known book by Lelia Patridge, *The Quincy Methods Illustrated* (1885). Mindful of the formalism which had developed in object teaching, Parker wrote: "These lessons should not be copied. Imitation never leads to creation."

The basis of the Quincy methods was, however, a new form of object teaching in a more natural setting and using a much greater variety of materials from common life and the sciences. The elementary curriculum of the Quincy schools was greatly enriched and much greater emphasis was placed upon the activity of the children, upon counting, measuring, calculating, drawing, coloring, modeling, conversation, and written composition. Indeed, so much emphasis was placed upon activity itself that some of the projects became, and were in fact called, "Quincy Busy-Work." This was one of the diseases that afflicted the new method. To find time to make the teaching more personal the children in each class were divided into smaller groups; and while the teachers then worked with one of these groups each of the other groups worked upon its own exercises. Some of these activities with pegs, splints, or beads were merely ways to keep the hands occupied. The children sometimes complained that they "had beans" in every room.

The curriculum was reformed. The schools paid more attention to physical education, for the harmonious development of the child was, according to Parker and Pestalozzi, "the guiding principle of the New Education." A combination of local and human geography was introduced. The plan of concentrating as much of the instruction as possible around a geographical core was developed. This was similar to Herbart's idea whether obtained from him or, as Parker thought, from H. H. Straight. The concentration of studies no doubt resulted from the attempt to unify the materials of an enriched program. Parker agreed with the Pestalozzi-Froebel emphasis upon varied self-expression, not only through speech and writing but also through drawing, modeling, and other means. Like Froebel he introduced the principle of the culture epochs and used primitive industries, myths, and folk lore as bases for manual work, history, and literature.

At the same time the course of study was flexible in the hands of the teacher, who was given freedom to experiment in selecting and arranging the materials. Textbooks were little used, subjects were fused, and the school skills such as writing and arithmetic were taught through use and not in separate classes. But there was an excess of recitations. The teacher was so much the center in the Quincy methods, there were so many questions and answers, that the children had too little chance to think and work consecutively. The object lesson had come back in a revitalized form. And as we have already indicated, the greatest significance of Quincy lay in its emphasis upon education for democracy and upon cooperation between the school and the home. Parker's best phrase was, "The ideal school is the ideal community."

For a brief period, Parker became supervisor of primary schools in Boston. During these years he gave several series of lectures at an early sum-

mer school for teachers at Martha's Vineyard, which had perhaps grown out of Agassiz's school. There Quincy and Oswego met. One day in 1882, after an enthusiastic lecture on Pestalozzi, in walked Hermann Krüsi, Jr., who had been for twenty-five years an Oswego professor and was the son of Pestalozzi's first assistant. Parker was just ready to begin a lecture. Krüsi who reported the incident wrote: "The enthusiastic man at once introduced me to his whole class with great warmth, and I was pleased to find that my work on Pestalozzi had found so many intelligent readers." Krüsi referred to his then recently published biography of the Swiss educator. Parker's lectures were published under the title *Talks on Teaching* (1883). He also wrote *How to Study Geography* (1889); and he was one of the most favored speakers at the meetings of the National Education Association. The last twenty years of his life were spent in Chicago as head of the Cook County Normal School and finally of the School of Education of the University of Chicago. Parker was not a technical philosopher but, more than anyone else before John Dewey, he was the spokesman for the "New Education."

But if child development, "free child, free teacher," and education for democracy were to be widely followed as principles in American education, it gradually became clear that the organization of the school would have to be changed. To many it seemed that the rigid promotion system of the graded schools was the greatest of all hindrances in their efforts to promote the welfare and growth of individual children.

8. EFFORTS TO BREAK THE LOCKSTEP

In the graded school with its fixed curriculum and annual examinations there were frequent failures. The failing pupils were required to take over not only the studies in which they had failed but all the work of the year. Many pupils were stopped completely, perhaps at the fifth or sixth grade, and continued to repeat the work until they could leave school forever at the end of the compulsory attendance period. Few people thought to inquire what proportions of the pupils failed and why; nor did they ask what were the effects of the failures upon the personality of the pupils or how they would respond in the future, when as voters and parents they had to do with public education.

Questions were however raised, after a while, by a well-known educator, Calvin M. Woodward of St. Louis. He published a study of "the age of withdrawal from school" (1878), based upon the figures provided by the St. Louis school report of that year. His indictment received little notice until the subject was revived in the nineties and his study was republished. Then Woodward returned to the inquiry with a new paper on "When and

why pupils leave school; and How to promote attendance in the highest grades." His answer to the latter question was that attendance in the upper grades would be promoted through free textbooks, an enriched course of study including domestic science and manual training, and regional high schools making it unnecessary for pupils to travel across town to attend. He also showed that the problem was much more acute in some cities than in others. The facts which Woodward presented had long been known in a general way, but no one knew precisely what was happening and very few had stopped to think that things might be improved. There was no real child accounting in education at that time.

To show how pupils of a given city at a given time were distributed by school years and chronological years, a new instrument, the age-grade table, was devised. Such a table was published in a book by Preston W. Search, *An Ideal School* (1901). The table shows that the schools of the city in question consisted of a one-year kindergarten, a nine-year elementary school, a four-year high school, and a year of "postgraduate work." The table also shows that in almost every grade a majority of the children were over age. This falling behind the normal rate of progress in the course is called "retardation." Reading the totals in the bottom line of Search's table we notice that there were five hundred ninety six-year-olds but only three hundred ninety fourteen-year-olds; and after the age of fourteen the numbers drop abruptly although the new entrants into the high school partly cover up the facts. This dropping out before the course is completed is called "elimination from school."

Within a few years the reports of city superintendents began to present such facts and in less than a decade a group of young statisticians started to deal with them much more comprehensively. E. L. Thorndike's study of *The Elimination of Pupils from School* (1907) was followed by *Child Accounting in the Public Schools* (1909) by Leonard P. Ayres and the same author's *Laggards in Our Schools* (1913). Ayres directed special attention to "the money cost of the repeater" and to the extraordinary difference in degree of retardation between comparable cities. George D. Strayer's *Age and Grade Census* had appeared in 1911. These statistical publications together with J. M. Rice's "Spelling investigation" (1895) and other studies of teaching efficiency may be taken to mark the American beginnings of the "science of education."

Attempts to overcome the evils of rigid grading had been made before accurate information was available: by Parker at Quincy through the formation of homogeneous groups in each room and by W. T. Harris at St. Louis by a plan of frequent reclassification and promotion. Harris, about 1868, had the pupils reclassified every six weeks so that none was compelled to remain long in a class doing work that was far above or below

his level or capacity at that time. Several other cities introduced modified forms of this frequent reclassification scheme.

Other individualizing schemes were the Cambridge and the Batavia plans, supervised study, and the platoon school. The Cambridge "multiple-track" plan allowed pupils to take a longer or shorter time to complete a standard course of study. The plan requires each pupil to do all the required work of the course but permits him to vary the rate. In other systems bright pupils were permitted to skip a half-year or a year of the course; or they were given extra work to do, thus asking them to complete an enriched or amplified course. Both the double promotion and the enriched course plans assume that the curriculum is adapted to the average pupil but that some adjustment should be made for the keen and aggressive pupils. On the other hand, the Batavia plan and supervised study as well as various forms of remedial instruction are intended to help the slow and the unwilling. Supervised study was very widely introduced about 1915, especially in high schools, but its equivalent was also used in the elementary grades. The Batavia plan was a form of supervised study in the elementary school devised by Superintendent John P. Kennedy of Batavia, New York. Under this plan two teachers were assigned to each room, one to help the pupils in their preparation and the other to conduct the group and class exercises. We have now mentioned three kinds of plans to adapt the school work to the varying abilities of the pupils: to vary the rate of the pupils' progress, to vary the total amount and kind of work, and to aid weak pupils to overcome difficulties which they could not master alone.

The most extreme position against rigid grading was taken by Preston Willis Search (1853-1932), who developed the scheme of individual instruction which is usually called the Pueblo plan after the city in Colorado where it was fully developed. Search varied all three of the factors named above, the rate of work, the amount of work, and the help given, in accordance with the apparent needs of each pupil. He turned the classrooms into laboratories, studios, and workrooms, and abolished all regular class work except in music and physical education. He did not individualize the course of study. Each pupil followed a regular course, and in each subject such as algebra, history, or Caesar the pupil prepared the same series of exercises, but he did this at his own gait, going as far as his abilities permitted in the allotted time. The teacher helped the pupils with difficulties and suggested methods of attack.

After Search, the most active exponent of "individual instruction versus the lockstep in education" was his disciple, Frederic Burk (1862-1924). As superintendent of schools, research worker under G. Stanley Hall, and Principal of the State Normal School at San Francisco, Burk wielded considerable influence. Like Search, he considered repeating and retardation

the cardinal evils in education and individual instruction the effective remedy. His example and his pupils spread the method, especially Carleton Washburne who devised a modified form, the Winnetka plan. The Dalton Laboratory plan, which Helen Parkhurst developed about 1915, was indebted to Burk but also to Dr. Maria Montessori of Italy and to Edgar J. Swift and his widely read book *The Mind in the Making* (1908). The Dalton plan was intended to give the pupil greater freedom, and also greater responsibility for "budgeting his time and fulfilling his contract." Both the Winnetka and the Dalton plans provided some opportunities for group activities and for cooperation along with the individual programs.

This combination of individual and group work also characterizes the platoon school or work-study-play plan which was carried out at Gary by Superintendent William J. Wirt. The more complete and economical use of the school plant is another major objective of the platoon plan. The school day is divided into three equal periods, and in any given period one-third of the pupils are engaged in "work," another third in "study," and the rest in "play." In this way all the facilities of a school will be in constant use. Many cities employ the work-study-play plan or some modification of it.

All of these plans have some merits, but none is a panacea and not one has lived up to the early claims of its sponsors. Some of them have been generally abandoned, including the Cambridge, Batavia, Pueblo, and Dalton plans, and the Winnetka plan has never been widely adopted. The present tendency is to use individual and group projects within the class system and the usual social organization of the school. We have learned from all this experimentation to provide for a moderate degree of freedom and responsibility and to increase both as children learn to use them wisely. Schools have not been able to dispense with the judgment and the leadership of the teacher. Teachers, in general, still believe that they should teach their pupils as well as guide them and should use class as well as individual methods.

We may appropriately close this section with a word from F. W. Parker who in answer to Search said: "The ideal school is the ideal community, an embryonic democracy. The child is not sent to school to acquire knowledge only, but to learn to live. Education is not so much preparation for life as it is real living. The teacher must be the leader in this community in which the child and teacher must learn to live not only for themselves but for others." Words such as these were accepted and have indeed been repeated by Dewey who continued the Parker doctrine of democratic education in a democratic school; and of this we say more in a later section of this chapter.

9. THE HERBARTIANS

The effort to develop a science of education was promoted by the Herbartian doctrines which were introduced in the early nineties. Herbart's psychology, his curriculum program, his methods, and his social aim all gave support to that endeavor. A short notice of Herbart and Bencke was published by Henry Barnard in 1873 and another by W. H. Hailmann the following year. Louis Soldan gave a brief exposition of Herbartianism before the National Education Association. Nobody followed up these suggestions at the time, and it was not until 1883 that Charles De Garmo announced to the National Education Association that he was on his "way to Germany to spend some years in the study of pedagogy." He went to the University of Jena and when he returned he became the Herbartian leader in the United States. He had many followers, for by 1900 fifty Americans had been to Jena to study Herbartian theory and practice. De Garmo returned in 1887 and two years later published his *Essentials of Method* and a translation of a psychology text by G. A. Lindner that was in the Herbartian tradition. For some time thereafter every year saw the publication by different writers of Herbartian books, either new or translated.

Associations were formed to propagate the new ideas. The National Herbart Club was organized in 1892 to facilitate their spread and application. Lange's original work on *Apperception* was translated by the members of the Herbart Club, and the American edition bears the names of the translators on the title page and thus forms an index of some of the leaders. In 1895, to overcome the doctrinal implications of its title, the Herbart Club was renamed; and still later, it became the National Society for the Study of Education. This was a not unimportant result of the Herbartian movement.

Although there were few if any strict disciples in the United States, those who accepted the Herbartian label made great changes in the schools. The greatest change was accomplished by renewed emphasis upon one of the eternal ideas, that children should understand what they learned instead of merely committing it to memory. But new ways of accomplishing this were devised. Studies were better organized around correlation centers, subject lines were passed over by integrating the materials, and the interests of the children were considered in the reorganization. Prominence was given to the type of lesson in which large units of connected, meaningful materials were taught according to a systematic five-step lesson plan. In fact the "steps" became far too prominent. Emphasis was also laid upon right social attitudes and conduct; and the social studies of

literature, history, and civics were brought in to supplement the Pestalozzian nature study. Closely connected with these changes was the socialized recitation emphasizing the free cooperation of pupils in developing a topic on their own initiative while the teacher remained in the background as a guide. Lesson planning, apperception, correlation, and concentration, the culture epochs, and the social aim compelled the reconstruction of the elementary school. No one should think Herbartianism unimportant in its influence.

At no period were the Herbartians allowed to have things all their own way. W. T. Harris, who was a partisan of Hegel, attacked Herbart with great vigor. Herbart's psychology was constantly under fire. Quite outside the question of its truth was the fact that it was difficult to understand. And it became fashionable to assure those who complained of its abstruseness that Herbart's psychology and his educational doctrine were quite independent. But this is clearly incorrect. Actually, Americans passed over Herbart's psychology because they were busy developing a psychology of their own, the evolutionary psychology of adaptation which was worked out by James, Angell, Dewey, and others. With the psychology they also discarded much of Herbart's educational system. But not everything. As a movement Herbartianism had run its course within a decade and a half, but many even of its opponents continued to bear the impress of its influence. The most notable example is John Dewey, who began as a Hegelian and therefore a critic of Herbart. But Dewey made industrial activities, in their historical and social development, the center of the curriculum and grouped the rest of the studies around this center. This is an example of the Herbart-Ziller theories of the culture epochs and concentration. Dewey's own steps in a complete act of thought are, as he pointed out in *How We Think* (1910), a transformation of the Herbartian steps. And his general aim of education has a fascinating resemblance to the moral aim of Herbart. Not all of Dewey is to be found in Herbart. One does not find there Dewey's use of the doctrine of evolution, his deeper socialization, or his vision of an industrial democracy, or, of course, his later instrumentalism.

10. PROGRESSIVE EDUCATION

The term "progressive education" has been in common use for more than two decades but, since the complex movement which carries this label has changed from time to time, its various meanings must be gathered from the narrative and description which follow. There is no acceptable, short definition. There were progressive teachers before John Dewey and Francis W. Parker. One may name Amos Bronson Alcott, G. F. Thayer, David

P. Page, and H. H. Straight, without exhausting the list. Not everything that these great teachers did was "progressive," but neither is everything progressive that the present progressives do. Some of the trends of the "common school revival" fall within the progressive category. All of the movements which have been described in the present chapter have some elements of progressivism; and the manual training movement, which is more fully treated in the following chapter, formed one of its introductory stages. The student should have in mind the doctrines of Rousseau and the work of Pestalozzi and Froebel, and should read the section on school activities in Chapter 20 in order to see the scope of the present topic.

Manual training and kindergarten education were combined in two new departures which took place in New York City about 1880. One of these experiments was made by Felix Adler when he organized a free kindergarten for workingmen's children in 1878. In this undertaking he proposed to form a new type of school "in which the reformed system begun in the kindergarten might be continued through all the higher grades of instruction." The next year the Workingmen's School was organized with hand-work, artistic and constructional activities, object lessons, and light gymnastics, in addition to the usual school subjects. Adler was most of all interested in practical ethics or improved social conduct, and his school became the Ethical Culture Schools or system, which today is one of the leading progressive centers. Unfortunately the schools had to charge fees and they are no longer maintained for workingmen's children.

The other new departure in New York commenced with the effort of Emily Huntington to adapt kindergarten methods to the education of older girls. She substituted domestic utensils and occupations for the kindergarten gifts and developed a curriculum based upon household activities. The society formed to promote these classes was called the Kitchen Garden Association; and it was later combined with the Industrial Education Association which was formed to prepare manual training teachers. The outcome of these movements, as noticed earlier, was Teachers College of Columbia University, with the Horace Mann School and later also the Speyer School as demonstration centers. The early work of Felix Adler and Emily Huntington was contemporary with Parker's work at Quincy, and the three are examples of the new education about 1880. Parker's later work in Chicago brought him into contact with John Dewey who in 1896 established his laboratory or experimental school at the new University of Chicago. The University Elementary School was the official title.

Several of the current trends in elementary education were integrated in Dewey's new school. The chief of these were the ideas of Froebel and Parker that the school should be a community and that learning should be an active and cooperative process involving investigation, construction,

and artistic creation; and these were supported by the biological and functional psychology of James, Angell, and Dewey himself, by the manual training and nature study movements, each of which underwent important changes at Dewey's hands, and finally by the effort to relate the school to the outside community. This laboratory school thus compounded of earlier elements was Dewey's first great contribution to what was later called progressive education. This was also the beginning of Dewey's philosophical development which found expression in a long list of works, including *Democracy and Education* (1916). We should premise that for Dewey philosophy and education are identical. Each of these familiar but even now still cryptic words means the practical experimental study by man of man himself and of his world. Dewey's philosophy gradually developed into experimentalism.

An excellent account of the school appeared in a series of nine monographs that were published in 1900 under the title *The Elementary School Record*. In one of these, Dewey deals with his debt to Froebel as follows:

One of the traditions of the school is of a visitor who, in its early days, called to see the kindergarten. On being told that the school had not as yet established one, she asked if there were not singing, drawing, manual training, plays and dramatizations, and attention to the children's social relations. When her questions were answered in the affirmative she remarked both triumphantly and indignantly that that was what she understood by a kindergarten, and she did not know what was meant by saying that the school had no kindergarten. The remark was perhaps justified in spirit, if not in letter. At all events, it suggests that in a certain sense the school endeavors throughout its whole course—now including children between four and thirteen—to carry into effect certain principles which Froebel was perhaps the first consciously to set forth. Speaking still in general, these principles are:

1. That the primary business of the school is to train children in cooperative and mutually helpful living.
2. That the primary root of all educative activity is in the instructive, impulsive attitudes and activities of the child, and not in the presentation and application of external material. . . .
3. That these individual tendencies and activities are organized and directed through the uses made of them in keeping up the cooperative living already spoken of, taking advantage of them to reproduce on the child's plane the typical doings and occupations of the larger, maturer society into which he is finally to go forth, and that it is through production and creative use that valuable knowledge is secured and clinched.

So far as these statements correctly represent Froebel's educational philosophy, the school should be regarded as its exponent.

The Chicago school was experimental in two senses. It was experimental in its constant use of experiment and inquiry as the children's method of learning; and also in its purpose to serve as a laboratory for the transforma-

tion of schools and of their relation to society. According to Dewey, investigation begins with a difficulty or problem. What was the basic problem which called the Chicago school into being? It was the Hegelian idea of conflict. There were the old oppositions between interest and effort, child and curriculum, and school and society. These phrases are the titles of some of Dewey's early writings. In *School and Society*, he directed special attention to the educational changes which had resulted from the industrial revolution. The school which he desired was to be a miniature society, in the closest relation to the larger society around it, and an agency for resolving social and intellectual conflicts.

Into such a school the occupations of common life and industry were to be introduced, not as special subjects or for vocational purposes but as the center of the general curriculum and the model for teaching-method. This core-curriculum-and-method idea was characteristic of the Chicago laboratory school. Children at the age of six began with home activities involving simple domestic and industrial tasks, materials, and implements. Thus manual training became industrial arts. In the following school years, using the culture epochs concept of the Herbartians as the organizing principle, the historical development of industry, invention, and group living was followed. The dependence of man upon nature and upon society led the pupils to the study of science and history. Nature study and simple experiments were introduced. Mechanical devices such as the spinning wheel and loom were used. The study of cotton, for example, was carried through all stages from the seed and growing plant, the matured fiber, spinning and weaving, to the uses of the finished cloth. Thus the old nature study in new forms was combined with industrial and social studies. Old and new inventions were studied. Clocks and telephones led directly to the consideration of communication and social cooperation. Blind effort, formal drill, recitations, and overt discipline were eliminated by guiding the children in self-education through discovery, construction, and cooperation in engrossing work. The school was in existence for only eight years, not long enough to realize its full promise. Even so it is unfortunate that we do not have a study of the influence it may have exerted upon its pupils. The usual assumption, therefore, that this was the ideal elementary school is after all only an assumption. It is, however, one that has been used in many situations by the disciples of Dewey.

There were other "new schools" at this time. Preston W. Search in *An Ideal School* (1901) named several of the progressive schools of that day: among the European, Abottsholme and the École des Roches; and among the American, the George Junior Republic, Felix Adler's Ethical Culture School, The Tome School, and the Casa de Rosas of Los Angeles, as well as several public school systems. But for admission to Search's list it

was rather imperative that a school should be a promoter of individual teaching, and this may explain why he did not mention the University Elementary School. Two new schools which may have been influenced by the Dewey experiment were the laboratory school of the University of Missouri, which was organized in 1904 by Junius L. Meriam, and the Speyer School of Teachers College, Columbia University, into which a strong Herbartian element was introduced by Frank M. McMurry. McMurry developed a curriculum composed of primitive life activities, domestic occupations, nature study, and construction work. Reading and writing were closely related to these activities. Arithmetic was separately organized but it was also connected with the activities as far as seemed feasible. The correlation of materials from different subjects was stressed and problems were employed, but there was provision for drill and subject mastery. The Speyer School under McMurry, therefore, followed a program that was intermediate between the activity and the conventional schools.

The schools named, although all contain new features, were based upon the doctrines of Herbart or Froebel, more especially the latter. The School of Organic Education opened in 1907 by Mrs. Marietta Johnson at Fairhope, Alabama, was a still more radical departure from current practice, and it closely resembled the plan of Rousseau. It was, however, a school, not a tutorial scheme. In an ideal school, said Mrs. Johnson, there should be tables and chairs, no desks, and not more than twenty pupils to a teacher. Money would be needed to reduce the size of schools to this number, but we have money for cut glass and silver. One may remark that some people have money for these desirable items. No reading or writing should be taught before the age of nine or ten and "infinite materials" for the children's work and play should be provided. There must be no acceleration and no specialization in the early years, that is, we must, as Rousseau held, lose time, not gain it. Interest, spontaneity, joy, and mental grasp, not knowledge or skill are the goals. There must be no recitations and no assigned lessons, no examinations, grades, failures, or promotions. The children should be outdoors in the midst of nature, but nature study makes children hate nature and is taboo. Music, dancing, singing games, and handwork, together with stories, are to be the main elements of the early curriculum. All children should be admitted to high school at fourteen and to college at eighteen without examination. This summary of her program is from Marietta Johnson's *Youth in a World of Men* (1929) and is an example of left-wing progressive education.

About the time of World War I and since then, numerous elementary and secondary progressive schools were founded and many older schools turned in the progressive direction. The Country Day School movement

of that period was evidence of dissatisfaction with the conventional mass education of the public schools. Wealthy or at least well-to-do parents in many of the large cities cooperated in the establishment of private day schools in the suburban or near-by rural districts. The Shady Hill Country Day School was opened in Germantown, Pennsylvania, in 1912; the City and Country School under Caroline Pratt in New York in 1914; the Walden School in New York and the Shady Hill School of Cambridge, Massachusetts, in 1915; and similar schools were established in other large cities. Many boarding schools and academies with elementary classes developed progressive philosophies and practices. Activity and project methods and core curricula were also introduced more widely in some of the large city systems, including some schools in New York, Denver, Des Moines, and elsewhere. The Progressive Education Association was organized in 1919 by a group of educators and interested citizens for the purpose of uniting those who were experimenting with the new schools and of securing the interest of a wider public for them. At first the Association was mainly concerned with elementary education but later, as we shall see in the next chapter, it moved into the secondary field also. In 1932 the Association became an affiliate of the New Education Fellowship, which carries on similar work in Great Britain, Europe, and other parts of the world.

At the time of its organization the Progressive Education Association declared that its aims were to encourage the free and natural development of children and for this purpose to study their physical and mental development and to base the education of children upon their interests. Many progressives later modified the latter principle to say that education should be based upon children's interests and needs. Even this did not satisfy everyone and some within the progressive ranks urged that social needs should also be considered; but one might raise the question whether these were really progressive. On the physical side the Association demanded small classes, expanded and improved health teaching and services, and better and more varied equipment for teaching and learning. They proposed to develop cooperation between the school and the community and to promote the freedom of teachers, two aims, each good in itself, but not always easy to harmonize. The progressive teacher, however, was to guide and stimulate rather than to control the child or to hear recitations. One of the leaders of progressive education, Vivian T. Thayer of the Ethical Culture Schools, wrote a book called *The Passing of the Recitation* (1928).

The first honorary president of the Progressive Association was Charles William Eliot, president of Harvard University and promoter of the col-

lege elective system. He was succeeded in office by John Dewey. For a time the Association conducted two magazines, *Progressive Education* and *Frontiers of Democracy*. The latter journal was discontinued in 1943 and shortly thereafter the Association took the new name of American Education Fellowship. It would seem that the Fellowship is taking a defensive position to try to hold ground already won and is giving up further pioneering. Progressive education had been under attack from the time of Francis W. Parker and the opposition seems to have increased after 1930. It was reported that the change of name was due to influences stemming from World War II and it is a fact that the membership declined sharply after the American entry into the struggle. War always reveals the real or reputed shortcomings of the schools. Similar charges were made in World War I, but the United States participated only a short time in that conflict and the accusations were quickly forgotten after our early return to "normalcy." In World War II, the continued existence of many remediable physical defects, lack of discipline, inability to write effectively, and great deficiencies in elementary mathematics and science were blamed upon the schools. But even if this arraignment is justified, the defects can hardly be attributed wholly to progressive education because our schools had not become widely and generally progressive. The accusers, however, assert that even conservative schools had become soft and flabby through the infiltration of progressive ideas. On the other hand the facts may be quite otherwise. It may be that in our attempt to provide free access to educational opportunity for all, we have everywhere, in the conservative as in progressive camp, placed too little emphasis upon accuracy and thoroughness.

Attempts have been made to evaluate the results of the work of the conflicting types of schools by scientific methods. J. Wayne Wrightstone's *Appraisal of Newer Elementary School Practices* (1938) and J. Cayce Morrison's *The Activity Program* (1941) are two of these. Both agree that in the "fundamental subjects" the pupils in the new schools do about as well as those under the older types of teaching and recitation. Pupils from progressive schools may do a little better in reading and writing English and a little worse in spelling and arithmetic, but there is little to choose between them. In more intangible matters such as breadth of knowledge and interests, social activities, initiative, and skill in dealing with new problems, the progressive school pupils excel those from the conventional schools, but again the differences, while significant, are not very great. These results must be profoundly disappointing to both parties. Neither the expert teachers, small classes, rich curricula, varied equipment, and new methods of the one, nor the more rigid standards, drill, and examinations of the other have solved the problem of securing a high level of universal literacy, critical intelligence, scientific knowledge, democracy, toler-

ance, and social cooperation. This does not mean that our schools have failed but it does mean that there is no easy road to a high level of national education. It must be the task of the next few years to learn all we can from the great and instructive experiment which progressive education is conducting and has conducted for the last seventy-five years. And our results should also be compared with those of other countries.

As is implied in the title of this chapter, the elementary school of the present day whether progressive or more conventional is a new school. Its instruction has a far richer content, its physical facilities and educational materials are better, its teachers have a more scientific preparation and clearer conception of their task, and its treatment of children is more humane and is based upon a fuller understanding of child nature than was the case one hundred years ago. The progress of the past is a guide and an incentive to further improvement in the future. But we must always remember that many of our schools in large areas have hardly been affected by the progress in other areas. Although the general level has been raised, many schools are even now poorly equipped and badly staffed, and have narrow, highly traditional curricula. Such uneven conditions set a great challenge before our educational statesmanship.

The old school was almost purely intellectual and bookish, even textbookish. The new elementary school has a far more varied, richer, and better balanced program than the old school employed. Nature study, health care and instruction, domestic activities, handwork, music, drawing, literature, history, and other materials have been added. Child study and educational psychology have supplied a valuable body of knowledge on growth, nutrition, interests, emotional stability and instability, group versus individual conduct, and other school and child conditions and problems. A great deal of knowledge is now at hand for the teacher's use. Social conditions have also, since the time of Pestalozzi and in the first instance through his influence, aided in transforming the old authoritarian relations between teachers and pupils. The older attitudes have largely vanished, and instead one finds greater cooperation and more scientific understanding. Teaching has become more informal and is more directly related to the lives of the pupils. New methods involving investigation by the pupils, group work, projects, and activities have come to be more widely employed. At this point, however, many students of education and prospective teachers sometimes develop a mistaken conception of the actual conditions in the schools. They think progressive education is more widespread than is the case. The activity curriculum, the child-centered school, integrated learning without subject divisions, freedom for the child within the school have become familiar phrases in descriptions of the new conditions, and these can all be found in actual schools here and there but

they are not general. They are still ideals rather than achieved conditions, and many responsible educators do not accept them as ideals. Most of our schools are likely to remain fairly conventional for a long time.

One of the permanent issues that was sharpened by the depression and also by World War II is that between social orientation and individual interests and development. On the one hand we have those who would stress the demands of society, the problems of American life and culture or education for democracy; on the other hand those who consider that the personal interests of children, recognized and accepted by them, provide the only sound basis for a school program. It seems that in the last decade the social aims have been given greater attention than they were between 1920 and 1930. Radical progressives would call this a reactionary trend and it may be in part a reaction against their program; but it is also a recognition that the elementary school needs to teach the duties and the values of citizenship in a democracy more effectively than either the old school or the new has done. The whole school, not only history or the study of current problems, should contribute to this end.

Considerable interest in school improvement developed even before the elementary schools had become fully established. A part of this concern was due to the influence of Pestalozzi. Emphasis was laid upon comprehension in reading and arithmetic, upon the use of illustrative materials such as pictures, drawings, and objects, upon the introduction of geography and elementary science into the course of study, and upon friendlier relations between teachers and pupils. Many children's books and schoolbooks, dealing with nature and giving practical and scientific information about things in the home and on the farm, were written. The Oswego system of object teaching was introduced into all the northern states but it was often merely another memory exercise.

The elementary science movement of the early part of the century led to nature study and back again to elementary science. The two are, indeed, hard to distinguish from each other for one form of nature study was simply elementary science; but there were also a sentimental or poetical study of nature and a utilitarian study with application to health, the home, and other practical matters. An extended literature was called out by the nature study movement, and schools were made more interesting and informative.

The kindergarten, the child study movement, and handwork and industrial activities came into elementary education together; and this is natural, for they have much in common. They have greatly modified the philosophy and practice of elementary education. It was these three trends, all of them embodied in the Quincy methods, that have done most in creating the new elementary school; but Parker at Quincy and elsewhere was important not only as a promoter of the "new education" but also as a vigorous protagonist of democracy in school and in society. Thus Parker laid the groundwork for progressive education for which John Dewey provided the philosophical justification. Dewey's early writings were an interpretation of Herbartian and Froebelian doctrines; but he soon

developed his well-known pragmatic and instrumentalist philosophy. Future historians may find that, in his case as in that of Parker, it has been his Americanism, democracy, and spirit of social reform rather than his technical philosophy that have most deeply affected American education.

QUESTIONS

1. Did the rise of science and of democracy provide a favorable condition for the introduction of Pestalozzianism? Compare with conditions in Prussia.
2. What is an educational fad? Did the Oswego system of object teaching have some of the characteristics of a fad? What part did propaganda play in the movement?
3. What characteristics are most necessary to an effective teacher? Make a simple scale and rank Henry H. Straight on it. Also F. W. Parker.
4. What forms of nature study would be most appropriate for a particular school with which you are well acquainted?
5. How has the Froebelian kindergarten been changed in the United States, and why?
6. Examine the literature on the subject to see whether children who attend the kindergarten benefit measurably from the experience.
7. How were the Quincy methods related to previous and contemporary educational theories and practices?
8. Would P. W. Search be accepted today as a progressive? How does his program differ from that of the child-centered school?
9. Is Dewey's idea developed in *School and Society* of basing the elementary curriculum upon the evolution of industry and society any less far-fetched than the culture epoch theory?
10. There are said to be thirteen varieties of pragmatism. How many varieties of progressive education can you distinguish?
11. What variety of progressive education do you prefer, and why?
12. How has World War II affected the elementary school which you attended?

FOR FURTHER READING AND STUDY

Many of the sources for this chapter have been given in the text and these will not be repeated. The final references in the preceding chapter, those on the normal schools at Westfield and Bridgewater, are useful in connection with the present chapter as well. Several magazines are of special interest here. Such are *The Nature Study Review* (New York, 1905 and after), *Progressive Education* (Washington, D. C., 1924 and after) and, for numerous child-study papers and the history of the movement, the *Pedagogical Seminary* (Worcester, Massachusetts, 1891 and after). The *Yearbooks of the National Herbart Society* provide data on the Herbartian movement in the United States. Paul Monroc's *Cyclopedia of Education* (New York, The Macmillan Company, 1911-1913) has

articles on the development of "Child Study," "Kindergarten," "Manual Training" and "Object Teaching." Several object teaching manuals are listed below as evidence of the nature of the subject and of the aims assigned to it. The *Educational Review*, edited by Nicholas Murray Butler, and the *Proceedings of the National Education Association* contain important historical materials.

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20 CREATING THE HIGH SCHOOL

IN OUR EDUCATIONAL RENAISSANCE THE COMMON SCHOOL developed with a speed and vigor which the high school for a long time could not match. It did not become the leading institution in the secondary field until almost the closing decade of the nineteenth century. Its growth was hampered by the competition of the academies, the pressure of college entrance requirements upon its program, the tradition that secondary education must be selective and restricted to the few, and the limited popular interest in secondary education and its high cost. Although many high schools had developed out of elementary schools, even these tended to become preparatory schools and there was justification for the criticism that they were selective. Like the common school, the high school finally won its victory by convincing the common people that it would become their school and would serve their interests.

1. DEFINITIONS

The most distinctive feature of the American high school is this, that together with the common school it provides a continuous program of general education which enrolls a greater proportion of the youth and retains more of them to the age of eighteen than the schools of other countries. Although its main function is to give general secondary education, this does not preclude the schools from giving specialized courses. Under the Smith-Hughes law, agriculture is taught even in many small schools. It stresses opportunity for youth rather than artificial standards. It is a day, not a boarding school, it is usually coeducational, and the instruction is free to the youth of its district. It is a public school, for under state law it is controlled by a local board elected by popular vote. Other countries also have developed great secondary school systems, but none has gone as far as the United States in providing free general education for its youth. In most countries the secondary schools have been, and to a degree still re-

main, distinct and separate from the common schools. In the United States the successive levels have been joined into an unbroken ladder leading from the kindergarten to the university.

2. FROM GRADED SCHOOLS TO HIGH SCHOOLS

We have already dealt briefly with grading in considering the American System, and in other connections, but the subject is so important to an understanding of high school development that further examples will be given. In most states the high school developed without legal authority, but laws permitting graded schools to be formed were frequently enacted: about 1850, in Iowa, "central grammar schools" and schools of higher grades; in New York, "union free school districts" with "secondary departments"; and in Pennsylvania, graded schools and the teaching of "higher branches." Many similar examples could be selected. The quoted phrases suggest the fact that the high school developed gradually and that its growth depended upon the grading of the schools. After the movement had progressed for several decades, that is, about 1870 or 1880, the character of the high school became clear. It was seen to be a separately administered and publicly controlled free school which offers general education to adolescent youth.

Even the famous Massachusetts law of 1827 was hardly a high school law. It was a re-enactment in somewhat broader terms of a still more famous statute, "the old deluder Satan" law of 1647. The new law prescribed that American history, bookkeeping, geometry, surveying, and algebra were to be offered in districts of five hundred families; and in districts of four thousand people, the employment of a teacher who was competent to teach Latin, Greek, history, rhetoric, and logic was demanded. This is a Latin grammar school law, and indeed the subjects named, excepting only the bookkeeping, surveying, and logic, are the exact subjects included in the curriculum of the Boston Latin School at that time. But while in 1647 every town of one hundred families was required to establish a Latin school, in 1827 a like provision was not demanded until the town had reached a size about eight times as large.

That graded schools formed the necessary base for the public high school must have been clear to many, but it was perhaps clearest of all to Henry Barnard. In 1838, when he had just become secretary to the Connecticut Board of Commissioners of Common Schools, he reported that the state had practically no graded schools, that so much was attempted in ungraded schools with all classes and ages intermingled that nothing was done well, and that the younger children were often neglected. Upon his recommendation, Connecticut passed a graded school law in 1839, and

in the following year a rudimentary but, as it turned out, permanent high school was established at Middletown.

The young city of Cincinnati also furnishes an early example of grading. An Ohio law of 1829 had made that city an independent school district, but the first public schools were not graded and were conducted in rented rooms. Seven years later in 1836 the first public school buildings were erected, and the schools were divided into two "grades," called primary and secondary, each comprising several years of work. Albert Pickett, who had been one of the advisers of the first staff of public school teachers in Cincinnati, was in 1840 a member of the school board. With the help of another member, James H. Perkins, he prepared a course of study with five grades extending from the alphabet and "teaching pupils to use their eyes as well as their ears" to high school mathematics and "rural economy" in grade five. The plan could not be fully carried out at once, but by 1847 the system was far enough advanced to permit the opening of the Central High School. Four years later the Hughes and Woodward funds became available and two high schools bearing those names were established. Many other high schools were opened in Ohio, Pennsylvania, and other states before the Civil War. It has been calculated that New England had one hundred and eighty-five high schools by 1865, but some of these were public Latin schools and others offered only partial courses of two or three years.

Secondary education, both private and public, entered upon a period of rapid expansion about the time of the Civil War. In the older states the sparse population, hard living conditions, and a great demand for manual labor had persisted for two centuries from the early settlements, but this pioneer period was progressively shortened as new states developed in the West. Even in the heavily wooded sections, such states as Ohio and Michigan quickly felled their forests and built cities, whose employments gave an opening for secondary education. Ohio, within a half-century after attaining statehood, passed her Akron law (1847) which permitted the grading of schools and the creation of "central schools." In Iowa this step took not half a century but hardly more than a decade. And in the far West many territories provided for general state school officers, public elementary and high schools, and a state university even before they were admitted into the Union. Through the migration of settlers from the older states and the optimism of the pioneers, the new states often started with plans which were in advance of those in operation in the regions from which the people had come. The North Central and Western states, which did not have as strong a prior allegiance to academies and private schools, accepted the high school more easily, developed it more experimentally, and supported it more ungrudgingly than the East and the Old South.

To report the number of high schools at a given time, say in 1860, is difficult because exact information is wanting and definitions vary. Henry Barnard, using a definition which involved a very high standard, estimated that there were only one hundred sixty. This left out hundreds of small schools, many with partial courses. In New England one investigator, as we have seen, counted one hundred eighty-five high schools by 1865, and two-thirds of these were in Massachusetts. In New York several academics had been taken over by the public boards; and union schools and high schools to the number of thirty or forty were in operation by 1860. Pennsylvania had as many. In Ohio, a student found evidence of twenty or more. We may reasonably estimate that by that time there were five hundred public high schools with a separate organization, each offering two or more years of work above the elementary school. But the academics were more numerous and more influential than the high schools until about 1880 or even later.

3. EARLY HIGH SCHOOLS AS ILLUSTRATIONS

The cities first established high schools, then the smaller towns, and not until after 1900 did the rural high schools develop rapidly. Boston opened its English Classical School in 1821, and this is considered to be the first high school. Philadelphia in 1838 was another large city to erect such a school. Each of these was a creation at a given time and place rather than an evolution such as we have described in the preceding sections.

Public opinion in Boston, having been awakened in the fight for primary schools, was ready to extend public education upward to the age of fifteen in order to make good the deficiency which arose from the fact that the city did not have an academy. A subcommittee of the school board reported that the elementary school curriculum was too easy for bright boys and that it encouraged habits of easy-going idleness instead of preparing them by vigorous study for the mercantile and mechanical occupations which they were to follow. Many parents could not afford to send their sons away from home to an academy. There was some fear that a new school might injure the Latin School and the upper classes of the elementary schools, but the town voted it in May 1821.

Boys only were to be admitted and only upon examination in the elementary branches including grammar. The age of twelve was set as the lower limit, and a three-year curriculum of English, mathematics, social studies, and sciences was formed. All subjects were required. The first principal was a noted teacher, George B. Emerson, and he was given three assistants. More than a hundred pupils entered when the school opened. The name, English Classical School, was later changed to English High

School. The term "high school" was probably introduced from Scotland and was not at once accepted by ultrademocrats who had no love for "high" institutions.

The charge of "aristocracy," really selectivity, which was leveled at the American high school was not without foundation. The later history of the Boston school furnishes some evidence. Comparison of the curriculum of 1821 with that of 1867 shows that at the latter date a fourth year had been added and a wholly different philosophy had been adopted. At the beginning the freshman studies were chosen to meet the needs of those boys who were unable to stay for the full course. But in 1867 it was declared "that it is for the best interests of the school, on the whole, to make the instruction of the first year conform more precisely to the requirements of a systematic course." In other words, freshmen who could stay only a year were to study the same subjects as those who would stay four years. We may anticipate to say that this untenable position was also taken by the Committee of Ten, twenty-five years later. But why should "the best interests of the school, on the whole" be preferred to the best interests of each particular student? The answer to this question and other obvious questions is found in the fact that in 1867 the English High School began to prepare its students for the then recently opened Massachusetts Institute of Technology. Thus a school founded for the sons of sea captains, small merchants, and artisans, forgetting its original purpose, was drawn into the net of higher education. Educational standards had won a victory over educational opportunities.

A high school for girls was opened in Boston in 1826 but this experiment had an unhappy ending. After two years under an able principal, Ebenezer Bailey, the school was closed because there were so many students that the city refused to provide the money which would have been required to continue it. The attack upon it was led by the Mayor, Josiah Quincy, who hotly denied its usefulness; but this was a point upon which opinions differed. In 1852, Boston established a normal school for girls which was later converted into a combined high and normal school.

When the Philadelphia Central High School came to be established in 1838, the high school idea had already undergone considerable development. The Massachusetts law of 1827, as we have seen, demanded the teaching of the ancient classics by public schools in the larger towns. The high school in Philadelphia included these studies and it was from the beginning a four-year school. And, also, it was influenced by the practice of the German *Realschulen*. Some plans and schools for teaching boys in preparation for the higher mercantile and mechanical pursuits had already been proposed or were in actual operation in Philadelphia. One of the latter was the private high school of the Franklin Institute under Walter R.

Johnson. Public interest was shown by the enactment of the Pennsylvania law of 1836 which authorized the opening of public high schools; and within the year, beginnings were made in Norristown and in Carlisle. The Philadelphia school board after receiving the report of a committee on the subject opened the Central High School in October 1838. The cities of Lancaster and York opened high schools in 1840. We shall use the Philadelphia school as another example of a growing movement.

In Philadelphia as in Boston, admission was by examination. Alexander Dallas Bache, who had recently returned from a study of European schools, was in 1839 chosen "president" of the new school. Bache organized three courses, a principal course, similar to the work of the German *Realschulen*, a classical course, and an English course. The principal course included work in English, modern languages, geography, mathematics which covered trigonometry, analytics, and descriptive geometry, and in addition physics, natural history, drawing, and the "evidences of Christianity." In the classical course, Latin and Greek were substituted for the modern languages, but in the two-year English course all foreign languages were omitted. By means of these parallel courses in a comprehensive high school, provision for three classes of students was made: those who wished to prepare for college, those who would enter business pursuits, and those who had time for a short course only. The two-year course was not popular and was later discontinued. Two-thirds of the pupils elected the principal course. The Philadelphia Central was one of the most fully developed, equipped, and staffed of the early high schools.

4. OPPOSITION TO THE HIGH SCHOOLS

Although the high school developed as a result of popular demand, it was not a universal demand and there was opposition. The early history of the Norwich Free Academy is instructive in this connection. A strong movement to establish a public high school in Norwich, Connecticut, developed in 1846, but the opposition proved even stronger and after a delay of eight years the present academy was founded as a private tuition school. In this and similar cases the establishment of an academy prevented or delayed the founding of a public high school. Later, by an arrangement with the school board of Norwich, the tuition of the local pupils was paid out of public funds, and this plan still continues in force. Elsewhere, many academies were from time to time transferred to the local boards and became public high schools. The Utica Free Academy and the Elmira Free Academy, both in New York, illustrate this process. A list has been compiled of about seventy New York academies which before 1874 became public schools.

In the Kalamazoo case of 1872 the Supreme Court of Michigan declared that a school district could legally use public money to teach branches above those of the elementary schools and to pay the salary of the superintendent. The case became famous because of the eloquent opinion written by Justice Cooley in which he supported the decision of the court by the historical, rather than strictly legal, argument that since the legislature had established public schools and a state university, the legislature must have intended that pupils should be prepared for the university by the lower schools. He argued that, since the university demanded a knowledge of a foreign language or languages for entrance, the schools below the university had the legal right to teach these and other preparatory branches. Although this decision has been frequently quoted and cited, its effect has probably been exaggerated. Within a decade after the Kalamazoo case, eight or nine other cases against the high school reached the supreme courts of other states and were decided in favor of the legality of the new schools. One of these which originated in St. Clair County, Illinois, bears a close resemblance to the Kalamazoo case. The main question was on the teaching of foreign languages in public schools. It was decided affirmatively in 1875, and there also the court based its decision upon the history of school legislation in the state. Some public controversy over the establishment of high schools has been traced in the same period in thirty or more states.

The opposition to the high school stemmed from various sources. The comparatively higher costs of high schools over elementary schools were frequently cited. The supporters of the high school pointed out that the comparison should be made between the costs of education in high schools and the costs in academies and attempted to show that the former were less. Other economic issues were also raised. The opponents argued that the heavy taxation which the high school required tended to discourage business. They also declared that a high school education caused children to despise manual labor. It was argued and denied that the high school courses were superficial, that they benefited only a small part of the population, and that the academies were more adaptable to the needs of the pupils and more thorough in their teaching. The private school interests seem to have mustered their forces against public secondary education for a special effort about 1885. At that time the high school enrollment in the country passed the total enrollment in private secondary schools; and the United States Commissioner of Education expressed the opinion, which history has confirmed, that the public high school would be the dominant institution in its field. By the end of the century the high schools were far in the lead and at present they enroll more than ninety per cent of all secondary school pupils.

5. EXPANSION OF THE PROGRAM OF STUDIES

The high school began with the somewhat broad curriculum of the academy, and this was further expanded as the schools developed. In 1820 the Boston Latin School offered seven subjects, including Latin and Greek; but the English Classical School of 1821, without offering Latin or Greek, taught twenty-one subjects. The Massachusetts law of 1827 specified sixteen subjects and this number rose to twenty-seven in the law of 1858. The high school of Providence, to take another example, in 1855 offered twenty-eight subjects. And Alexander Inglis listed seventy-three subjects as taught in different high schools in Massachusetts in 1861, although no one school offered all of these.

The Boston high school at the beginning offered only a single curriculum, but before long other schools began to organize two or more parallel curricula, and one of these was usually a college preparatory curriculum. The Philadelphia high school began with three curricula. Frequently in the early high schools a "normal" curriculum for teachers was also provided. This was usually similar to the general curriculum but included several professional subjects. As the movement developed the comprehensive high school, offering several kinds of curricula rather than the specialized school giving only a single one, such as the commercial, the manual training, or the college preparatory curriculum, became the typical American high school. The Central High School of Philadelphia, as was indicated, was an early example of this important trend.

The colleges had a pronounced effect upon the high school program. The great variety of curricula in most colleges in the latter part of the nineteenth century is indicated by the creation of new degrees such as bachelor of letters, of science, of philosophy, and of music. This bloated condition of the college offerings was paralleled by a similar distention of the high school program which now included several modern languages and Latin, many English subjects such as rhetoric, composition, literature, and the history of literature, several varieties of social studies including modern and American history and civics, and the sciences which gradually came to be taught by laboratory methods. The high school did not give degrees but it created a large number of curricula with such titles as English-Latin, Latin-scientific, English-scientific, in addition to the older general and college preparatory curricula. In 1900 a total of thirty-six curricula each leading to high school graduation was observed in different schools. Not many subjects were dropped from the high school program, but Greek was offered less and less frequently. Indeed it never secured a foothold in the smaller schools and was soon confined to the large city

high schools. Logic, astronomy, and the "evidences of Christianity" often given in the early high schools also disappeared. It will be noticed that the expansion up to 1880 mainly involved what are known as academic subjects such as literature, languages, mathematics, the sciences, and the social studies; but beginning about that time a new period of further expansion set in and this involved "things to do" as well as things to learn.

6. ENTRANCE OF THE ACTIVITIES

The earlier high schools had devoted themselves to a literary and intellectual program, but before 1900 several imaginative and expressional and several semivocational subjects were introduced. The high school began to emphasize not only knowing and understanding but also doing. Agriculture, commercial studies, home economics, manual training, and music were now taught. Such a classification into knowing and doing is, however, not at all absolute, for language and literature involve speaking and writing as well as reading; mathematics, and science, especially when taught by laboratory methods, also involve activity. Yet it will not be denied that the new subjects stress training in skill and physical performance more than the older. We shall not have space to include the development of all the new activities; but as music was one of the earliest we shall take it first.

Music instruction books were written in colonial times, one by Thomas Walter in 1721. Private singing schools began about the same time and continued for a century and longer. These were classes meeting periodically for the purpose of teaching the students to read music, to give them practice in singing, and to cultivate familiarity with hymns, songs, and choral works. It was a form of adult education. Until music was taught in the public schools, the singing school and the church choir were the chief means of music education open to the people.

Music was introduced widely into the public elementary schools in our educational renaissance even before 1830. Boston began to give such instruction regularly in 1838 when Lowell Mason, one of our great teachers, became supervisor of music in the schools of that city. From the elementary schools, music spread to the high schools and an early text, the *High School Choralist*, was prepared by Charles Aikin (1818-1882). Graded series of books for music study were developed after the Civil War, and the normal schools and some colleges began to prepare teachers and supervisors of public school music. The Commissioner of Education in 1886 reported two hundred and fifty cities in which music was regularly taught; and so rapidly was it spreading that three years later eighty others were added to the list.

During the last half-century since about 1890, much of the emphasis has shifted from vocal to instrumental music and an extraordinary development has taken place, first of the school orchestra and in the last two decades of the school band. Indeed the band, and the marching rather than the concert band, has tended to win the greatest applause; but the high schools also continue to do not less but more choral and orchestral work. The phonograph and the radio, and the great artists and organizations of national fame, have given music a place in the life and the schools of the United States that could not have been imagined even forty years ago.

The teaching of drawing as a useful study and especially as an aid in mechanical vocations was urged by Benjamin Franklin and Henry Barnard. To this Horace Mann added that this skill is of value to the teacher in illustrating his lessons. The high schools of Philadelphia and Baltimore offered work in drawing about 1840, and in the former school Rembrandt Peale was for a few years the teacher. Drawing textbooks began to appear. Massachusetts by a law enacted in 1870 became the first state to develop an effective program of drawing instruction. Few states followed this example, but many of the larger high schools in all parts of the country introduced the subject without a mandate from the state.

For a long time drawing was taught to serve industry and this is still an important purpose, but more recently new ideas and a broader program have developed. Free-hand drawing, sketching, illustrating, commercial art, modeling, and even home decoration and home planning have been given a place. Art appreciation in schools may perhaps be dated from a campaign of Ross Turner about 1892 for schoolroom decoration. The aims of appreciation subjects include the cultivation of the taste and of talent and the enrichment of life and leisure. Recent efforts have been made to relate the arts to everyday living and to join usefulness with beauty as well as to teach the best of both old and new art. The teaching of commercial and industrial art has kept pace with these more personal and expressive trends; but American education has not yet become art conscious to the degree that it has become music conscious.

The early purposes of manual training and of drawing instruction were the same, to serve industry; the methods of teaching also were similar, and the two subjects were often taught in close association with each other. In both, a formal method was developed. Both emphasized imitation, exact representation, and a step-by-step procedure. Experiments with shopwork courses were carried on by Calvin M. Woodward of Washington University in St. Louis shortly after the Civil War. Businessmen, hoping to find a substitute for apprenticeship, supported the venture and a manual training school was erected in 1880. The prospectus declared that "the interests

of St. Louis demand for young men a system of education which shall fit them for the actual duties of life." This was a repetition, in almost the same words, of the aims of the first high schools opened sixty years earlier. Manual training was now to aid in doing what the older schools had not fully accomplished.

To indicate that he was interested in manual training not only for industrial purposes but also for its value in general education, Woodward used, and perhaps coined, a phrase which swept over the country. He said that manual training made it possible "to put the whole boy to school." Woodward also showed that the high schools were not holding their pupils, that too few of those who entered remained to graduate. He attributed the loss to the narrow academic curriculum and thought the remedy lay in the introduction of manual training, home economics, and other practical studies. This was twenty years before Preston W. Search in *An Ideal School* in 1901 published an age-grade table, and thirty years before Edward L. Thorndike made his pioneer study of retardation and elimination from school.

Private manual training schools were opened in a number of the large cities. The public elementary and high schools rapidly took it up. When the Children's Industrial Exhibition was held in New York in 1886, it displayed the work of all school grades and from many localities including some as far west as Chicago. A public manual training high school had been opened in Baltimore in 1883 and other cities followed this example. A few higher institutions had introduced shopwork even earlier. The Illinois Industrial University, now the University of Illinois, had prepared an exhibit of shopwork for the Philadelphia Centennial Exposition of 1876. Eventually the land-grant colleges became extremely effective agencies for the promotion of shop and laboratory work, industrial and practical arts, applied science, home economics, and agriculture, but this influence came only after several decades of experimentation. The most prominent early introduction of manual training into a higher institution was made by the Massachusetts Institute of Technology. This was the Russian system of the Imperial Technical School of Moscow. It consisted of formal drill exercises which never produced any finished objects; but its defects were not seen until later. Its value lay in setting up graded series of class exercises to develop shop skills, which could be easily administered in a school. Only in 1894 in the naming of the Macy Manual Arts Building at Columbia University was the word "arts" substituted for the word "training," to embrace the ideas of beauty, utility, and skill in one concept.

The United States Commissioner of Education in 1900 noted "a steady increase from year to year in the enrollment in the schools devoted espe-

cially to manual and industrial training." There were then about one hundred such schools and some of the largest high schools in the country were in this class. The new Technical High Schools gave considerable emphasis to vocational education without becoming trade schools, but many public trade schools were founded also. The trend, however, was toward the general high school in which the manual training curriculum ran parallel to the home economics, general, classical, and other curricula. The whole great movement toward activities had developed as the result of the convergence of many forces including the demands of a society which was rapidly becoming urban and industrial, the decline of apprenticeship, the introduction of science teaching, the kindergarten and child study movement, and the growing high school enrollments of which manual training was partly cause, partly effect.

7. THE RISE OF INDUSTRIAL ARTS EDUCATION

The ideas of Froebel that the school should be a community and that learning should be an active and cooperative process were applied in the elementary school which John Dewey directed from 1896 at the University of Chicago. These ideas had already been given considerable emphasis by F. W. Parker and they were now to be further supported by the biologically functional and evolutionary psychology of "the Chicago school" of psychologists of which Dewey and James R. Angell were prominent members. In Dewey's "experimental school," the industrial occupations were not special subjects but became the center of the curriculum. They were also considered to embody the most effective method of teaching; and, accordingly, subject matter and method were regarded as complementary phases of all learning situations. Weaving, for example, studied through the construction and use of a simple loom would involve a different content from weaving studied from a book, a lecture, a film, or even a demonstration by the teacher. The school was "experimental" in the sense that the children, under guidance, "experimentally" determined their own curricula and methods. Dewey in 1899 explained the theory and practice of the school in a book, *School and Society*, which quickly attracted wide attention.

Occupations were selected that were considered "real" for children and not merely those which were typical of adult activities. These were to serve as means through which the school was to become an active community instead of a place set apart for learning lessons. Dewey held with Parker, Froebel, and Rousseau, that through these direct modes of exploring, manipulating, investigating, and constructing, there would arise "plenty of opportunities and occasions" for the use of number, reading, writing, and

spelling. These were no longer to be "subjects," but rather organic phases of the child's continuous experience. The natural activities of the child in following out his purposes would effectively correlate all his experiences, thus making unnecessary any special efforts at correlation such as the Herbartians of the same period tried to introduce. The phrase industrial arts was made necessary by the development of mechanized industry, and was coined by Charles R. Richards about 1904; and he and Frederick G. Bonser became leading interpreters of Dewey's conception of industrial arts. In the modern high school the work of the industrial arts department has since 1900 become more and more industrial and scientific and has come to use a wide variety of materials. In the high school, however, integration with other phases of schoolwork is often very slight. The aims are turning toward teaching for wise production and consumption in an industrial society.

8. VOCATIONAL EDUCATION TRENDS

Active interest in vocational education paralleled the rise of industrial arts education. The report of the Douglas Commission to the legislature of Massachusetts, the founding of the National Society for the Promotion of Industrial Education by Richards, David Snodden, and others, and the study of the same field by the New York State Department of Labor all came in the first decade of the twentieth century. A few technical schools for boys of sixteen or eighteen had already demonstrated what can be done in teaching the skilled trades. Efforts were now to be made to develop vocational schools either full-time or on a part-time cooperative basis. To study the questions further and to secure public support for the movement, state vocational commissions were appointed in several states about 1908 and 1910. Laws were also enacted authorizing cities to establish vocational schools. The most complete and detailed act of this kind was adopted by Wisconsin in 1911. This law helped to create a dual system since the state and local boards of vocational education which it established were separate from the local school boards and state education departments which had charge of the ordinary public schools.

Vocational education raised several problems which call for continued attention. The gulf between vocational and general education was widened by the increased activity of the federal government which resulted from the Smith-Hughes (1917) and later acts with similar objects. The recent war-training programs looked in the same general direction. The possibility that we are turning toward a national and state system of vocational education which will come into competition with the public school system which has been built up by a century of thought and effort is unfortunately

a real possibility. Competition for funds is only one phase of this problem. Another stems from the conviction of public school leaders that young boys who have not completed their high school education are quite unprepared to choose their life-work wisely. This phase has led to the vocational guidance movement which has been growing vigorously since the early years of the present century. A related issue divides capital and management against labor. Labor leaders are disturbed by the prospect of the free and unregulated preparation of skilled and semiskilled mechanics and fear that this would seriously depress that area of the labor market. On the other hand, the lack of trained mechanics assumed almost crisis proportions in the war emergency of 1942 and 1943. Laborers also desire for their children the opportunity to prepare for the white-collar occupations, and in consequence they tend to favor general and academic courses. Further, the rapid mechanization of industry and agriculture is making it more difficult for young workers to secure employment and this social fact is one of the chief reasons why the compulsory school age has been raised, the average period of school attendance lengthened, and the enrollment in high school increased so rapidly in recent years.

Space limitations preclude a complete account of the high school curriculum expansion. Commercial studies have been briefly treated in an earlier chapter. The omission of agriculture and physical education leaves big gaps unfilled. Home economics also has made an important addition to the program. Progress in home economics education occurred in three periods: a long early stage when chiefly needlework was taught; a middle stage when, through philanthropic, health, and welfare movements and the establishment of the state colleges of agriculture, the foundations were laid; and the present period which began about 1914 and in which the field of home economics teaching has been expanded and diversified. Textiles and clothing, foods, cooking, nutrition, and housing are still the basic subjects, but in this third period other areas also have been cultivated. These include home management, furniture, decoration, fuels, health and home nursing, consumer education, child care and development, and the study of personality and home relationships. In a report of 1939 covering fourteen thousand high schools, it was found that about three-fourths of these offered home economics and that the largest enrollments were in the ninth and tenth grades.

Enough has now been detailed to show that a revolution in high school facilities, personnel, and purposes occurred in the latter nineteenth and the twentieth centuries through the introduction of activities and practical subjects. An administrative transition accompanied the changes in the program of studies. In this transition the high school was gradually freed somewhat from domination by the colleges. The early examinations for

admission to the high school had long been given up. Now the control which the college entrance examinations exercised upon the high school itself was also to be relaxed. We shall turn back to trace the progress of this trend.

9. ACCREDITING SCHEMES

Admission to college had always been granted upon examination by the individual college itself. About 1870 the University of Michigan and a few years later Indiana University began to admit the graduates of accredited high schools without an entrance examination. The University of Michigan sent visitors who inspected and accredited the individual high schools, but Indiana University accepted the graduates of those schools which the State Board of Education certified as standard schools. These arrangements proved so satisfactory to both the schools and the universities that they were adopted by other institutions; and within thirty years similar accrediting systems were accepted by about two hundred colleges and universities, chiefly in the newer states. The new plan did not relieve the schools from preparing their pupils in the specific subjects which were demanded by the particular college which they wished to enter. The scheme was otherwise unsatisfactory because both the required standards and the required subjects varied from state to state and the subjects often differed among neighboring colleges in the same state. To correct this condition and to develop a more uniform policy for secondary education, the Committee of Ten was appointed and later regional associations of colleges and secondary schools were created to perform the accrediting functions. The latter came to be known as standardizing associations.

10. THE COMMITTEE OF TEN

The Committee of Ten was appointed by the National Education Association in 1892 with Charles William Eliot as chairman, and it made its report the following year. In preparing its report it had the assistance of numerous subject committees. The Committee in its report agreed that college preparation is not the main function of secondary schools, but what was thus granted was again withdrawn by the declaration that the same subjects taught in the same way form the best preparation for both college and life. Each subject was to be considered equivalent to any other that was pursued successfully for the same length of time. But they set up sample curricula in which the academic subjects were strongly emphasized. And they urged that for purposes of "mental training" each major subject must be pursued for a considerable period of time. This would be

desirable for the mastery of a field also but if each subject is to be studied thoroughly the number of subjects that any one pupil could take will be clearly limited. Such a program also, like that of the College Entrance Board, did not encourage high schools to experiment with nonpreparatory kinds of work and services. As if to counteract some of the effects of the previous recommendations, the Committee proposed to reduce the elementary school to a six-year program in order that foreign languages and high school mathematics and science could be begun earlier. They also favored some degree of subject election by high school pupils.

The work of the Committee of Ten seemed, at that time, to be much more important than it actually was. Even within the Committee there was disagreement, and a minority report was prepared by the dissenters. These demanded a larger place for the activity subjects, opposed the doctrine of the educational equivalence of different subjects even for college preparation, and demanded a very different selection of subjects for the ninety per cent of the pupils who would not go to college. There were similar disagreements among schoolmen at large and it was charged that the Committee had been overstaffed with college and private school teachers and executives. A study of the effect of the report of the Committee of Ten, made by Edwin G. Dexter about 1905, found that the expansion of the high school program of studies had been little affected. Indeed the report was immediately followed by a brief trial of the elective system in many high schools. The rising opposition in the country to the doctrine of formal discipline may have been another reason why the report had no greater influence. In fact this outcome was foreseen by Chairman Eliot who predicted that the American high school, as he expressed it, would "diverge from the academy and endowed school, the first working on an information programme, the latter on a training programme."

11. FORMAL DISCIPLINE CONTROVERSY

The doctrine of general mental discipline which the Committee of Ten accepted was widely held. In its broadest form this is the view that learning develops a general mental capacity which may be turned to any mental task, much as the sun's energy can be diverted to many kinds of work such as to cook a meal, to warm a house, or to light a city. When this general mental capacity is supposed to result from the form of a study, we call it formal discipline. The study of plane geometry was, in this sense, supposed to develop the power of deductive reasoning and the study of botany to cultivate power in classification. When skill acquired in one field, say telegraphy, is supposed to make it easier to acquire another skill such as

typewriting, we call the mental process transfer of training. These terms, formal discipline and transfer of training, are not always used consistently but they always imply that acquired mental capacities spread to cases and situations in which there has been no, or little, practice. Such views were used to support an academic curriculum such as the Committee of Ten favored.

An attack was launched against this doctrine by the early Herbartians who returned from their study in Germany about the time when the report of the Committee of Ten appeared. The question was also raised in a notable address by B. A. Hinsdale before the National Education Association in 1894. And an inconclusive experiment to test the doctrine was reported by William James in his *Principles of Psychology* which appeared in 1890. Other experiments were made before 1901, the year when Woodworth and Thorndike reported a famous study which had given a few negative results and a larger number of cases of small positive transfer. At the moment it seemed to many that the idea of transfer of training would have to be given up altogether, but this was an error. It seems obvious as a matter of sense and experience that mental abilities have both a specific and a more general phase; that when a boy has learned to add he will be able to add numbers which he has never added before; and that when he has acquired a more general concept of number he will be able to add negative and positive numbers with little further training in addition.

Today, with many hundreds of experiments completed, we know that transfer does occur but there is not complete agreement upon the amounts nor any single explanation of the way in which it may be secured. In about ninety per cent of the experiments, positive transfer has been found, but it has usually been in small amounts ranging from almost zero to as much as twenty per cent of the improvement in the trained function or skill. It seems also that the amounts are greater with young and very intelligent pupils; that they are greater when the training materials and the testing materials are similar; and that the amount can be increased by teaching and studying for transfer. The pupil who searches for principles and generalizations will be able to make a broader application of his acquired knowledge and skill than one who does not. We no longer suppose that a skillful student of Latin, mathematics, or science is by such study fully prepared for every emergency of life and we do not base high school curricula upon a theory of easy and universal transfer of training; but neither does the wise teacher neglect to develop principles, draw comparisons, and find varied applications of the work of his pupils. President Eliot was mistaken in supposing that the high school will merely purvey information. The outcome of the formal discipline controversy has made teachers wiser in this matter than their predecessors.

12. THE STANDARDIZING ASSOCIATIONS

To secure greater uniformity in entrance requirements voluntary standardizing associations were formed in several sections of the United States, thus performing by agreement what in some countries was done by government dictation. The associations of colleges and secondary schools were usually formed at the instance of the colleges and were largely directed by them. The New England Association of Colleges and Preparatory Schools (1885) was the first, and it is significant that the term "preparatory" instead of secondary or high schools is used. Others were the Association of Colleges and Secondary Schools in the Middle States and Maryland (1892), the North Central (1894), the Southern (1895), the Northwest (1918), and the Western Association (1930). The associations in their meetings considered not only uniform entrance requirements but also means of improving secondary and collegiate education and of developing helpful relations between secondary and higher institutions.

The North Central Association in 1900 recommended that member colleges should admit only those students who had completed the equivalent of a four-year course of sixteen units, a unit being defined as "a year's work in a subject for four or five periods a week." Included in the sixteen units there were to be two units of English, two of mathematics, one of science, and one of history. The same idea was a little later accepted by the Carnegie Foundation for the Advancement of Teaching, hence the term "Carnegie units." The North Central and other associations undertook the inspection of schools. Those schools which upon inspection met the standards of their associations were accredited. As late as 1940 less than six thousand out of a total of about twenty-five thousand secondary schools in the whole United States had met the standards of their regional associations and had been accredited. The standards set up by the different associations varied among themselves so that although the North Central Association set the pattern and some standards were common there still were no uniform national standards of college admission. The recent co-operative study of secondary school evaluation and standards by these associations will be treated below.

A second mode of college admission, through uniform entrance examinations, was developed by the Association for the Middle States and Maryland from a suggestion by President F. A. P. Barnard of Columbia University; and this led to the formation of the College Entrance Board. This Board, established in 1901, soon became an independent body. Its examinations are held annually at several hundred points in the United States and in foreign countries. The Board has endeavored to bring about

"an agreement upon a uniform standard as to each subject required" by the colleges as well as agreement upon methods of teaching and the desired preparation of secondary school teachers. It has obviously not tended to encourage high schools to experiment with new types of high school work and services.

13. THE JUNIOR HIGH SCHOOL

The reorganization of the schools into elementary and junior and senior high schools is often said to have begun in Columbus, Ohio, in 1908, and Berkeley, California, in 1909. And it was about that time when the idea began to attract attention; but the Committee of Ten had suggested it, the curriculum of the schools of Springfield, Massachusetts, in 1867 partly embodied it, and even the English Classical School of Boston in 1821 might be claimed as a junior high school. The Boston school was a separately organized, three-year high school which included the ages from twelve to fifteen and followed a shortened elementary school course; and it offered an enriched curriculum which was supposed to be adapted to young adolescents. Considering still further the date of origin, Thomas H. Briggs in his *The Junior High School* (1920) reports two junior high schools before 1900 and five others before 1909 but without giving the locations.

It is often supposed that we had a fairly universal 8-4 organization before the coming of the junior high school, but this, as we have seen, is an error. There were elementary school courses of six, seven, eight, and nine years, and high school courses of two, three, four, and five years as well as other course-lengths and almost every possible combination of these. More than one-fourth of the larger cities did not have an elementary school of eight years followed by a high school of four years. So much for the uniformity of our 8-4 plan; although widespread, it was not universal.

The arguments for the reorganization were numerous. Some of the committees of the National Education Association, such as the Committee on Economy of Time, urged a readjustment of the elementary curriculum to enable pupils to prepare for college at an earlier age. This result has not been achieved, for pupils still finish the junior-senior high schools at eighteen in most systems. Bright pupils in the upper grades of an eight-year elementary school, it was claimed, were merely marking time. This "sauntering," as John Locke called it, and the resulting habits of idleness, which the Boston subcommittee of 1821 deprecated, could be overcome by an enriched course. There were precedents for this. In European secondary schools and in good private schools, the pupils at the age of eighteen were one or two years ahead of most American children in their

educational advancement. Some subjects such as foreign languages, algebra, and prevocational work should be begun earlier. Pupils above the sixth grade needed broader opportunities and differentiated curricula. This result has been attained in many schools.

The program of studies for youth, it was pointed out by Nicholas Murray Butler, should be based upon the nature and the stage of development of the pupils, and children between the ages of twelve and fifteen are in a transition stage between childhood and full adolescence. The program should be adapted to them. This is seemingly a reasonable proposal, but there are difficulties in settling upon the stage of child development which a given pupil has actually reached and in showing in practical terms how the curriculum may be adapted to the young adolescent. Pupils, it was said, would stay in school longer if the end of the compulsory attendance period, frequently at the age of fourteen, and the completion of the elementary school course did not come at the same time. Costs would be reduced, congestion in elementary schools relieved, and the junior high school would be located nearer to the homes of the pupils than the senior high school. The last was an important factor, for experience has shown that many more pupils will attend if schools are made more accessible. Perhaps the most frequently used argument was that the junior high school would help to bridge the gap between the elementary school and the departmentalized high school by providing exploratory courses, by giving more attention to the individual pupil, and by introducing departmentalization gradually.

The junior high school spread slowly after 1910 and more rapidly after 1920. Many grade combinations have been tried and are in use but the 6-3-3 and the 6-6 plans are the most common ones. The reorganization increased the enrollments, especially of boys, it retained pupils in school longer, and it has succeeded in furnishing more varied programs for young adolescents. Most of the large cities and many smaller and rural systems have adopted the new plan. But the factors that give vitality to the junior high school are appropriate methods, courses, equipment, and skillful teachers, not mere reorganization.

14. THE JUNIOR COLLEGE

About the time when the junior high school was developing, and even earlier, several junior colleges were established. These are institutions which offer two years of work or more above the senior high school and which, therefore, cover somewhat the same ground as the first two years of the university or college course. Some of these regard themselves as terminal schools and offer vocational as well as academic courses; others are preparatory to the upper division of a college. There were junior colleges be-

fore 1850 but as the result of a self-conscious movement the institution must be placed in the latter decades of the nineteenth century.

Two ideas were basic. The first was the idea that the university should not dissipate its strength in teaching the elementary subjects of the freshman and sophomore years, but should devote itself to advanced studies and graduate and professional work. This is, of course, the practice in Europe where the secondary schools do the work of the early college years in the United States, and where the university student begins at once to specialize if not in a narrow subject then at least in a field. President Henry P. Tappan of the University of Michigan in 1852 urged that institution to transfer its lower division work to the high schools. This was not done, but in 1883 the university began to differentiate the work of the first two from that of the last two years and to permit specialization in the upper division. Similar developments took place in Minnesota and elsewhere, but the first real separation of the two divisions was effected at the University of Chicago under President William Rainey Harper who is sometimes called the "father of the junior college."

The second idea was that many high school graduates who would not attend a college or university should have the opportunity to do one or more years of work beyond the high school. This they would do, it was evident, if local institutions for that purpose were available. President Harper fostered this idea and urged the stronger high schools to establish junior college departments. Such extensions of the work of the high school, though for preparatory purposes, were carried forward in Michigan where the state university began in 1895 to accept one year of college work from the better high schools of the state. In response to the proposals of President Harper, junior colleges in affiliation with the University of Chicago were opened in Joliet, Illinois, and Goshen, Indiana, and elsewhere. Long before this time also a few private academies and seminaries began to offer one or more years of college work; and some struggling four-year colleges reduced their offerings to two years of work. The latter process was especially common in Texas, Missouri, and the Old South. In 1907 the state of California passed a law to permit high schools to offer "post-graduate courses of study" for their own graduates or those of other high schools; and the city of Fresno in 1910 took advantage of this law to establish a public junior college. Many others have been opened in that state, and California is the home of many of these institutions.

There are several hundred private and public junior colleges, perhaps as many as five hundred, with an enrollment of a hundred thousand students. Most of them are located in the Middle West and California. More than a third of the states have laws permitting the establishment of junior colleges as public institutions.

15. VOCATIONAL GUIDANCE

Schools took little interest in vocational guidance before 1900, and as an organized effort it began in 1908. The essential features are self-analysis, occupational knowledge, and expert advice both upon the choice of a vocation and upon the necessary preparation for entrance upon the work and for progress in it. The choice must be the student's, for vocational guidance is a democratic process. Finding jobs for people is not vocational guidance and still less is the mere assignment of people to jobs. Yet in many countries youth is given little freedom or consideration in the choice of suitable careers. It is significant that in Poland, Germany, Austria, Italy, and Rumania, instead of vocational guidance in the schools, the state has set up vocational bureaus or exchanges in the departments of labor. The purpose is to use the "human resources" to build up the economic and military strength of the nation rather than to enable individuals to find and prepare for satisfying careers. The greatest progress in true vocational guidance has been made in Great Britain, France, Switzerland, and the United States.

More than most movements, vocational guidance in the United States was the idea of one man, Frank H. Parsons (1854-1908), who organized the Boston Vocation Bureau in 1908. The financial support was provided by Pauline Agassiz Shaw, who had already subsidized the kindergarten and the manual training instruction of Boston. Paul H. Hanus of Harvard University served as chairman of the board of trustees and introduced courses in vocational guidance into the Harvard Summer School. Vocational counseling was introduced into the Boston schools in 1909, and this helped to launch the movement as a phase of public education. Even in this case, the originator, Parsons, had been anticipated by George A. Merrill, who had organized a manual training school in San Francisco, and by Eli W. Weaver, the principal of the Brooklyn Boys High School. But, while these men had provided counseling services, it was the work of Parsons that led to the spread of vocational guidance. The first city-wide organization was established in Grand Rapids (1912) where Jesse B. Davis, the principal of the high school, was the leader. A National Vocational Guidance Association was formed in 1913. In the first number of the *Vocational Guidance Bulletin* in 1916, the editor listed fourteen cities which had special vocational guidance officials. The depression of the thirties and the war that followed have emphasized the need for guidance, but it is still true that many high schools offer little or none and also give little postschool attention of any kind to those who graduate or those who drop out. Several states have passed vocational guidance laws.

The Federal Board of Vocational Education was in 1918 given the responsibility for a Rehabilitation Division of Disabled Soldiers, and two years later civilian rehabilitation was also assigned to it. The rehabilitation of disabled soldiers became one of the most significant achievements in education and guidance in any country. More than one hundred thousand men completed the training and were immediately placed in useful positions. The National Youth Administration (1935) had a section on vocational guidance. The American Youth Commission (1935) made an extremely important survey of youth and employment, upon which Howard M. Bell reported in *Youth Tell Their Story* (1938). The Commissioner of Education has ruled that funds appropriated under the Smith-Hughes and George-Deen Acts are available for vocational guidance; and a Chief of Occupational Information and Guidance Service has been added to the staff of the Office of Education. The Office has also published a great deal of vocational information.

The social outlook of vocational guidance is a key problem. Many counselors believe that they have obligations to society as well as to the advisee. Teachers, whether directly delegated to give vocational information and guidance or not, will need to study the movement and the work of their own schools. The time when guidance could be left to chance or wholly to an expert or a bureau is past. It is one of the main functions of a school to aid pupils in understanding not only vocations but social forces and especially economic ones. And the schools should also follow the careers of their pupils after graduation, records should be kept, and the schools should use their resources of knowledge and understanding of the pupils and of life to aid them in their early years as workers.

16. NEW GOALS AND FUNCTIONS

The present high school has developed far beyond the ideas of 1890 and in a direction that diverges more and more from the European concept of the secondary school as a selective institution for the preparation of an intellectual elite. By 1910 the high school had come to the smaller towns and the automobile was facilitating the building of strong rural high schools; the junior high school was developing; the program of studies was still growing; and a broader, more democratic, and more practical education was gaining in favor. These trends were supported by the departments and schools of education, by the land-grant colleges and state universities, and by the social-educational philosophies of Francis W. Parker and John Dewey.

A reformulation of high school objectives was made by the Commission on the Reorganization of Secondary Education which reported in 1918

under the title *Cardinal Principles of Secondary Education*. They decided that secondary education should be based upon the needs of society, the natures and capacities of the pupils, and professional knowledge of education. They pointed out that only one-third of the elementary pupils reached the high school and that of these only one in nine remained to graduate. They approved the junior high school and declared for the comprehensive senior high school rather than one specialized along technical, commercial, college preparatory, or other particular lines. They proposed the following as objectives: health, command of fundamental processes, worthy home membership, vocation, civic education, worthy use of leisure, and ethical character. As an aid toward the attainment of these aims, they proposed that the curricula should be composed of constants, to be taken by all, variables, and free electives. In language that is reminiscent of Condorcet they declared that in a democracy education "should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he will find his place and use that place to shape both himself and society toward ever nobler ends." Whereas the Committee of Ten had made college preparation primary, the Commission in planning the work of the high school made preparation for life the primary purpose.

The Commission somewhat unaccountably did not call attention to the contemporary movement for the supervision of study in the high school. It had been noticed that high school pupils often did not know how to take notes on their reading, how to make a systematic outline, how to use the dictionary, or the encyclopedia, effectively. They were unable to translate problems into algebraic language or effectively to attack a passage for sight reading. In literature they did not sense the mood or the purpose of the writer. In a word they did not know how to study. It was now proposed that the teacher should teach not only in the class but also by supervised study.

Several plans were used. One was the unprepared lesson. This was a period set aside for the preparation of a detailed assignment with the help of the teacher. A second plan was that of the divided period, one-half of the usual class period being given to preparation and the rest to group consideration of the material. This had the advantage that it did not interfere with the established daily schedule. Still another plan used double periods, this longer space of time being used as in the divided period plan. If these plans, which were much used about 1920, helped to emphasize teaching instead of mere reciting and if they enabled pupils to become independent students able to work on their own account they must have been salutary.

Both vocational guidance and supervised study, as well as the Commission Report of 1918, are evidences and effects of the change that was

taking place in secondary education. The vast increase in high school enrollments changed the composition of the student body and led to a transformation of the philosophy of high school education. In 1890 there had been less than three thousand schools and slightly over two hundred thousand pupils. The Commissioner of Education reported thirteen thousand, nine hundred and twenty-two schools of secondary grade for the year 1915, and eleven thousand, six hundred and seventy-four of these were public high schools enrolling one and one-third million pupils. In the quarter-century the high school enrollment, having doubled each decade, had increased to six times the 1890 figure. Whereas in earlier times only the best of the elementary pupils even considered attending a high school, now the least academic often enrolled. During the transition period from 1890 to about 1910, the schools still took the position that it was their first duty to uphold academic standards. If the pupils came ill prepared and if they did not succeed in the studies the high school offered, these facts merely showed that they should not have come to the high school at all. But the public now felt that the high school should serve their children, and taking them as they were, it should teach them what was best for them. School administrators, who were in direct contact with the public, and later the teachers also came to take this view, and thus the high school gradually became a higher common school for all adolescent children who presented themselves.

The program expansion continued and curricula were multiplied. In 1929 the Commissioner of Education reported that the high schools of the country were offering two hundred fifty subjects or branches of subjects. The nomenclature and the makeup of the curricula varied, but the most frequently offered were the college or technical school preparatory, the commercial, the general, the industrial arts, and the household arts. Other less frequently offered curricula were named the English, modern languages, fine arts, music, and agriculture curricula. The practice of free election had disappeared, but a similar result was secured by allowing many substitutions and by counting subjects of the most diverse character as equivalent in educational value. Social demands and administrative considerations had driven the old and really vital question of educational values into the background. Extracurricular activities had secured a strong position in the school if not always in the formal program.

Extracurricular activities have sometimes been considered as mere diversions, the froth of student life. On the other hand there is a tendency to give them an increasing part in the work of the school, and in some ultra-progressive schools student-directed activities are tending to displace the formal curriculum. The problem everywhere is to make all activities, whether work or study or play, serve valid educational purposes.

School athletics and student government are two forms of extracurricular activities that have a long history. Vittorino incorporated games and physical exercises in his fifteenth-century school. Sports have formed a part of English upper class education from early times. In his school in Silesia, in the sixteenth century, Trotzendorf developed a school republic so that boys by learning to administer and obey laws of their own making might later rule and serve according to law. More elaborate forms of student government were found, early in the nineteenth century, in the Hazelwood School in England, in Froebel's school at Keilhau, and in Fellenberg's school at Hofwyl, examples which may have been due to the rise of political democracy in Europe and America. More or less highly developed forms of student government have been widely introduced in more recent times. Literary societies, debating, public speaking, and dramatics were early cultivated in the schools of many countries. Comenius tried, though unsuccessfully, to embody a whole curriculum in dramatic form.

High schools do much in promoting and guiding extracurricular activities, and teachers who are especially prepared to direct athletics, dramatics, musical organizations, and debating are often employed. The school assembly, which was formerly given over to speeches by the principal and teachers, or to persons brought in from outside the school, is now often conducted by the students themselves and sometimes involves active participation by the audience. Clubs, which take a great variety of forms, and social events are fostered. School authorities often frown upon the secret societies which creep into many high schools in imitation of the Greek-letter fraternities of the colleges and try to ban or regulate them. State laws have sometimes been invoked against them. Many activities, which were formerly considered outside the curriculum, have now been incorporated with it and almost all if skillfully directed may be used to support educational purposes. The greatest significance of these interests comes from the fact that they are the concerns of the pupils themselves, voluntary expressions of their desire to lead, to cooperate, and to create.

17. RECENT TRENDS

The responsibility of the high school principals to their pupils and communities frequently impressed them with the need for more power to resist unwholesome local interference; and, on the other hand, the old question of high school-college relations, which in spite of many efforts had never been settled to the satisfaction of the principals, was becoming more rather than less irritating as the high schools became stronger. These two conditions were the chief reasons for the formation in 1917 of the National Association of Secondary School Principals. How urgent the latter

problem seemed may be gathered from the proposal of one of the founders who said: "I believe in the principle of inspection so firmly that I would extend it even to the inspection of the colleges by the high schools. The colleges inspect us to see whether our product is good enough for them to work with. Now let us inspect the colleges to see whether they are good enough to have the care and direction of our boys and girls." And Jesse B. Davis, a past president of the Association, in a review of its history declared: "Twenty-five years ago the National Association of Secondary School Principals was conceived in rebellion." The rebellion began in the Middle West where the high school was most powerful.

One would expect to find extended consideration of high school-college relations in the meetings of the Association, but this did not happen. Instead they were practically ignored and the Principals' Association dealt instead with problems of organization and administration, with the curriculum, student government, extracurricular activities, teaching problems, ability grouping, educational and vocational guidance, character development, the junior high school and junior college, and the function of education in a democracy. Although it may have been "conceived in rebellion," what really interested the Association was the question how the high school may best function as a higher common school. One of its important achievements has been the creation of a National Honor Society of high school students for the encouragement of character development, leadership, scholarship, and service.

An important study was made by the Association through its Committee on the Orientation of Secondary Education of which Thomas H. Briggs was chairman. The Committee began its work in 1932 and made its final report in 1935 during the tercentenary celebration of the founding of secondary education in the United States. The summary of the Committee's findings is embodied in the ten "issues" and ten "functions" of secondary education which they formulated. These were submitted to forums of schoolmen throughout the country for consideration and application. The functions are statements of the main tasks of secondary schools, a new and more elaborate set of "cardinal principles." Only once do they even by implication recognize that the high schools are preparing some of their students for college.

The ten "issues" on the other hand raise a whole series of questions, some of which the trend of our history for thirty or forty years has been answering. Whether public secondary education shall be given to all youth or only to some, whether it shall work for the welfare of both society and the individual, whether it shall provide differentiated curricula, whether it may offer vocational education, whether it shall be concerned only with knowledge or also with attitudes, whether it has a distinct field of its own

—these are hardly issues any longer. The answers which the history of the high school has given to these questions are hardly any longer in doubt. But they have certainly not yet been universally accepted and they may need modification in the future. The purpose of the formulation was doubtless to have them critically examined, especially by those of the profession who had not already accepted them.

The ninth issue asked: "Shall secondary education seek merely the adjustment of students to prevailing social ideals, or shall it seek the reconstruction of society?" Clearly all education, even if it does not intend it, actually does something to reconstruct society. But asked, as it was, during the economic depression, this question was doubtless intended to raise the alternative between the current economic system and some degree of greater social control. In this sense it was a living issue. The seventh "issue" will serve as a transition to our next topic. It contrasted the usual organization of secondary school work under the conventional subjects with a proposed organization into "functional" topics or fields such as the social-civic, the economic, the vocational, and other large interests. This was also a central issue in the "Thirty Schools Experiment" of the Progressive Education Association.

The Progressive Education Association was formed in 1918 to work for the improvement of both elementary and secondary education; and in 1930 it appointed a Commission on the Relation of School and College. The main question which it was to answer was significantly framed thus: "What would secondary schools do if they were completely freed from all detailed college entrance requirements?" Accordingly, several hundred colleges were pledged to accept the graduates of the selected schools on their records without special examinations, and without demanding the usual work in specified academic subjects. The schools were set free to teach those materials and in those ways which they considered best for the development of boys and girls, whether they intended to go to college or not. Several University High Schools and many private schools participated, and some of these usually sent eighty or ninety per cent of their graduates to college. But the public high schools of Tulsa, Denver, Des Moines, and Altoona were also included. Several of the schools were known as "progressive," but not all aspired to that designation and some were fairly "conventional." It is best to say simply that about thirty schools and systems of mixed character were set free to try what their staffs, students, and clientele wished to attempt.

The "experiment" began in 1933 and continued for eight years until 1941. It touched upon practically all phases of secondary school work, but curriculum reorganization was particularly involved. Curriculum study was not new. It had been carried on in American high schools for more

than a decade before 1930 and less intensively for fifty years. Many methods of study had been tried: analyses of textbooks, of educational aims, and of life needs, job analysis, studies of the interests and capacities of youth, and comparative measures of school achievement. The chief difficulty was not in getting facts about youth, life, and the school but in finding any generally accepted principles which could be scientifically applied.

The Thirty Schools tried out a variety of nonsubject curriculum organizations. These might be named the fluid or experimental, the contemporary problems, the unified studies, and the cultural period curricula. The experimental curriculum is made cooperatively by pupils and teachers from day to day and is changed and redirected as the work is going forward. It contains little previously organized subject matter, no formal lessons, and no set recitations. This resembles the practice of the Dewey Experimental School at Chicago.

The contemporary problems curriculum deals with a living issue. The question of "housing" would be an example of somewhat restricted scope, while "a planned society" would be one of very wide scope. Any such problem will be studied from many standpoints. A study of the home would have to cover family income, housing, home equipment, food, servants, child care, personal relations, reading materials, and other topics. Usually several teachers cooperate in developing such a "core" curriculum. This is also done in teaching a unified studies curriculum in which several subjects such as English and the social studies, or mathematics, the sciences, and the industrial arts may be combined into a single field of study. The cultural period curriculum finds its "core" in some epoch or race such as ancient Greece, the Arabs, or Anglo-Saxon civilization. All phases of the period or culture are studied such as the art, politics, literature, science, work, and commerce of the Greeks, for example; and the purpose is to understand the life of today by the comparative and philosophical study of an epoch upon which somewhat definitive verdicts have been pronounced, as they cannot be in the case of contemporary civilization.

The students who entered college from the Thirty Schools made records that were a little better than those made by equally able students from other schools. They excelled their paired competitors somewhat more in extracurricular and social activities. The methods used in pairing students have been questioned. And one is surprised that the differences were comparatively small when the students from the Thirty Schools had the advantages of a particularly stimulating school environment and excellent teaching. Perhaps college success while significant is after all a crude measure of the value of the preparatory work. Given the required mental caliber, it seems that anyone who has studied earnestly in either a progressive or a conventional secondary school can succeed in college. We should

now have a careful study of the success in college of students from small and substandard high schools. Do they also do acceptable college work?

In a little more than a century the high school has become more widely distributed and accessible than the elementary school was in 1830. It has also become more firmly entrenched in the good will of the people than the common school was at that time, but this acceptance was not easily won. The colleges, the private schools and their partisans, the business world, and the general public have kept up a fairly continuous fire of criticism. In no period of its evolution has it been free from attack, but it continued to flourish because it continued to give youth opportunities which no other country had provided in equal measure and which we could provide by no other means that were proposed.

The vitality of the high school is shown by its ability to profit from criticism and to adapt itself to changing demands. Again and again it has taken over the work of private schools and incorporated their services in its own program. When manual training was developing under private auspices, it was quickly adopted by the public school. When an aggregation of business colleges spread throughout the country, the high school established commercial courses. When laboratory science teaching, agriculture, home economics, music, and physical education programs developed, the high school adopted them. When the need for social education, student activities, and guidance came to be seen, the high school incorporated them in its program. But it is only the large and well-equipped school which can perform all these and other functions of a comprehensive high school, and many American high schools are small and are compelled to do the best they can do with their limited resources.

The high school has developed as a public school, a local school, and a day school. These three are among the most obvious and also most important of its institutional characteristics. It is a local, day, and not a state or national boarding school because it is intended to serve the great body of the people who cannot send their children away from home for purposes of education. It must, therefore, be located close to the homes of the children. As a result of this wide distribution many high schools are small schools. How small they are may be shown by a few figures. Three-fourths of all the schools are located in towns of twenty-five hundred people or less or in the open country. Three out of every five, or sixty per cent, of these rural and semirural schools have an enrollment of less than one hundred pupils and another twenty per cent have between one hundred and two hundred pupils. A very large proportion of the smallest schools are not accredited by their regional standardizing associations. At the same time many larger schools have not realized all their opportunities. The present condition of a school may be, in the long run, less important

than the vigor and intelligence with which it is going forward and trying to improve its work. It was this view which led the standardizing associations to seek better ways of stimulating high school improvement.

The Cooperative Study of Secondary School Standards was carried out by a committee which began as early as 1928; but the study was formally begun in 1934. The committee was aided by advisory members from the American Council on Education and other bodies, and the study was jointly financed by the associations themselves and the General Education Board. Dissatisfaction with the rigid and mechanical standards that had come into use had been felt for some time. These standards usually covered such points as the amount of preparation which teachers had received, teacher loads, finances, the number of books in the school library, and laboratory and athletic equipment. The purpose of the study was to discover the characteristics of a good school, the best means of evaluating these, and the best methods by which a school can be stimulated to improve.

By a process of formulating evaluative criteria, trying these experimentally in a number of schools, and criticizing and reformulating them in the light of the experience gained, a definitive scheme for the cooperative evaluation of secondary schools by the staff and with the help of external committees was perfected by 1940. The scheme of evaluation uses both judgments made by teachers and competent investigators, and objective measures obtained from the use of tests and scales. More than a dozen phases of the school and its work are covered in a complete evaluation, and a definite program for improvement is the finest result. Among the phases covered are the school's philosophy of education, the pupils and the community, the program and courses of study, pupil activities, the library and its use, guidance, instruction, the staff, the plant, and the administration of the school, and also the outcomes of the school's work. Evidently a survey of a high school made on these broad bases will be more qualitative than an inspection which uses the older quantitative standards; and since the evaluations are made cooperatively by teachers, administrators, and outside experts, they serve an important purpose as means for the professional re-education of the staff and the improvement of the work and services of the schools. The stimulus which such an evaluation can give may be far more valuable than its standardizing function.

18. POSSIBLE FUTURE DEVELOPMENT

Current social conditions are certain to influence all education and especially secondary education. World War I, the centralizing tendencies in government, the depression that followed the business collapse of 1929,

and World War II which began just ten years later are among the most ominous of these events and conditions. Some effects are already evident. There were in 1940 about seven million pupils in the high schools and about half as many adolescents in the country who had not yet been reached. The hope of providing secondary education for all the children of a great nation has long been considered chimerical by European and some American skeptics; and autocrats have even considered it highly undesirable. Present and imminent financial stringencies will make it more difficult. It is certain that to achieve such a goal we must accept it as a goal and must work to attain it.

There is today a deep concern that youth shall be better prepared to deal effectively with questions of public policy and the problems of democracy. It is altogether probable that foreign policy will in the future occupy the people more and more. Social studies have long been emphasized in the high school and in college. Almost one-third of the college students whose records were examined in the Thirty Schools experiment specialized in these fields while the next most popular fields of English and of the physical and mathematical sciences each attracted less than one-half as many. But while the social studies are popular, there is great disagreement on what should be taught in this field and how it should be taught. There are still those who think that the schools should "teach the facts" and the "known truth" of history and economics, avoiding controversial questions; others who would indoctrinate the pupils in what they regard as the best answers; and also a third class who doubt whether high school students can think to any purpose about such issues as the tariff, sovereignty, and the relations of capital and labor. But if young people by the age of eighteen, when they have been in school for twelve years, do not have the knowledge and training to deal with public questions, then it is hard to see where and how they will be equipped to perform the duties of citizens in a democracy. This applies particularly to that large group whose schooling ends with high school graduation. The Social Studies Investigation which was sponsored by the American Historical Association between the years of 1929 and 1933, the *Fourteenth Yearbook* (1936) of the Department of Superintendence, and a whole library of volumes by individual authors have dealt with this problem. While no final solution has been found or will probably be found, it is reasonable to hope that the teaching of the social studies is becoming more effective in developing political and economic understanding among high school students. This is certainly an urgent need. The high school must learn to teach democracy by democratic processes. As one phase of this task it must establish closer contact with its local community; and as another phase it must teach its pupils to read, to handle evidence, and to think independently.

Twenty-five years ago, as we have seen, there was a vigorous supervised study movement, but it did not fully achieve its main object which was simply to teach children to read and to think. That task must be continued more vigorously, intelligently, and persistently; and it is not a question of double periods or divided periods or other forms of organization but of stimulation and effective teaching. Reading is not a simple, mechanical skill but a series of highly complex skills which become progressively more difficult as the topics studied become broader, more technical, and more controversial. The high school of the future will teach reading in every year and every field by helping children to make use of the knowledge and the ideas which they gain in solving real and urgent problems. The high school teacher of the future will use the recent studies of the psychology of reading which have thrown much light upon the processes which are involved.

The depression of the thirties taught us much about the sad dilemma in which youth in an industrial society find themselves in such a period. The high school of the future will give more attention to vocational guidance and to vocational education. It is not enough to give courses which describe occupations and to supply occupational guidance through counselors. The school must provide work experience in school and community. It must teach working skills and attitudes, both as bases for the choice of an occupation and preparation for the pursuit of the occupation that is finally selected.

In these and other ways the high school of the future must be closely related to its community if it is to be effective in teaching citizenship, vocations, and economic cooperation. It must use the educative resources of its community more fully than it has done. And it must also aid the continuing education of the parents and other adults of its locality and serve as an effective agency for the improvement of community life. Taking advantage of these and other opportunities to serve, the high school as a still young and adaptable institution has before it the promise of extended development and usefulness.

The high school is our third effort to develop a serviceable secondary school. It followed the Latin school and academy. It is a public secondary school, closely articulated with the elementary school and offering a general course to practically all adolescents who wish to attend. Generally, the high school was an upward extension of the graded elementary school, but some early high schools were transformed academies. The high schools, early in their evolution, became college preparatory as well as terminal schools. College preparation tended to make them selective; and the effort to serve the community as a terminal school made them comprehensive and coeducational. The cost of the new schools, their selective character, and the vested interests of the academy were the occasion for

strong opposition to high school expansion. After about 1880 or 1890 the schools gradually broadened their programs and began to serve a widening constituency; and the public in turn began to defend and support them more heartily.

The program of studies was expanded first along academic lines, then vocational and skill studies, and last extracurricular activities were added. Except for bookkeeping and surveying which were taught in the early high schools, the vocational courses did not develop until late in the century and vocational guidance began about the period of World War I. The junior high school movement developed at the same time. The public junior college, which has also shown its most rapid growth in recent decades, provides a favorable opportunity for educational expansion.

High school principals long felt that their schools were tightly wedged in between the elementary schools which directed the children for eight years and the colleges which restricted the high school program through their entrance requirements. By developing the junior high school below the tenth grade and securing a very considerable degree of freedom from college control, the high school has carved out an area of secondary education that is reasonably free from external domination. What the high school shall do and become is more largely in its own hands now than it has been ever before. Through the National Association of Secondary School Principals, the "Briggs Committee," the Thirty Schools experiment, the standardizing associations, and the leadership of state departments of education, the present high school has attempted to decide upon a progressive plan for future operations. The task of the high school and junior college will be to provide solid foundations in language, mathematics, science, and social understanding, to give effective vocational preparation and guidance, to establish the character and physical and mental health of its pupils, and to prepare them to deal effectively with questions of public policy and problems of democracy, including world democracy. To do this, or any large part of it, is a challenging task for the high schools of today and tomorrow.

QUESTIONS

1. What are the ten most essential characteristics, such for example as co-education or public control, of the high school?
2. Study a number of these characteristics to determine why and how they developed. In this process it is useful to compare the American with some foreign secondary schools.
3. Why may the graded school be regarded as a necessary preliminary to the high school? Why not also to the academy and the Latin grammar school?
4. Why did the high school develop more rapidly after the Civil War than before?
5. Why did the country decide in favor of the comprehensive rather than the specialized high school? Find as many examples as possible of specialized high schools and why they were created and still survive.
6. Did the high schools reap any benefits from "college domination"?
7. Compare the meaning of the terms: manual training, industrial arts, vocational education, technical education.

8. How could high schools serve their clientele better by keeping in touch with their graduates? Would you include the "drop-outs" in your proposals?
9. What are the advantages and disadvantages of voluntary accrediting and standardizing schemes as compared with governmental ones?
10. How well has the junior high school fulfilled the claims made for it in the reorganization period?
11. "Shall secondary education seek merely the adjustment of students to prevailing social ideals, or shall it seek the reconstruction of society?" This is the ninth of the Briggs Committee "issues."
12. Shall the high school abandon the ordinary subjects and institute core curricula and "functional" studies? What is "functional" education?
13. What conclusions may be drawn from the Thirty Schools experiment? Do all of your fellow-students agree with your summary of the results?
14. Analyze the conditions and services of the high school that you attended; and show how its work could be improved. Your proposals must be practicable and not mere dreams.

FOR FURTHER READING AND STUDY

Numerous articles dealing with the development of the academy and the high school have appeared in leading educational journals including Barnard's *American Journal of Education*, the *Educational Review*, and the *School Review*. Only slight hints can be given here of the variety of these materials. Volume Nineteen of Barnard has a table showing the frequency of fifty-nine subjects in the curricula of thirty high schools about 1867 (p. 463); and a section dealing more fully with the curricula themselves (pp. 465-576). The *Educational Review* and the *School Review* carried numerous articles on the work of the Committee of Ten between the years 1893 and 1895. Special attention is due to an article on this topic in the former journal for December, 1896, and another in the latter journal for April, 1906. A few other articles of special importance are included below.

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21 EDUCATION TODAY

WE HAVE NOW SURVEYED THE HISTORY OF ORGANIZED EDUCATION for children and adolescents in a considerable portion of the world from early times to the present. We may not leave the subject without reviewing the achievements of the schools and considering a little further what guidance for conduct is to be derived from the history that we have been studying. From such a review one must not, however, demand too much. We shall not aim at an unattainable completeness or try to foretell the distant future. The past has not turned out to be an open and easily read book. To give finally satisfactory solutions to the problems of the present is impossible, and not to the historian only. Educational philosophy, psychology, and administration labor under similar disabilities. The most useful results will be obtained when all these disciplines cooperate in fastening their attention upon a problem and when the student is led to study, investigate, and experiment for himself. Even then every act will still be a venture that may have unforeseen results, for that is the nature of life. This is itself one of the greatest lessons of history and one which grows in importance as we contemplate it. A second lesson, the counterpoise to this, is that what happened in the past sometimes determines the present and the future for a long time to come.

1. SOME GENERAL RESULTS

The Western world has had experience with organized education for a period of more than twenty-five centuries. The lessons that have been learned are spread through the record but it will be useful to call special attention to a few of them, leaving others to the thought and inquiry of the student. Our history, then, has shown that it is feasible to educate entire populations, all the people, rich and poor, boys and girls, of a whole country; that the ability and the desire to learn are universal when proper provision is made. In the last hundred years, this hope and belief of Co-

menius, Condorcet, and Pestalozzi has been approximately realized in some countries and the possibility sufficiently demonstrated in many others.

Not only the possibility but the desirability of universal education has been demonstrated to the satisfaction of almost all. This second demonstration is perhaps more important than the first. How much and what kinds of education for each and for all is still a problem; but a democratic public, at least, desires and will support schools for everyone. Some governments and nations still maintain the class education of the benevolent despots. They provide one kind of education for the peasant and working class, an education for industry, loyalty, civil obedience, and moderate intelligence; and a broadly based education dealing with exact knowledge and general ideas for an elite who are to be professional and political leaders. This is, as we have said, the projection into our own time of the program of the benevolent despots. All must accept the fact that men differ in ability and therefore in educability, but democracy cannot admit that ability, wherever it may exist, should be restricted in educational opportunity. Democracy cannot accept the principle of fixed social classes, for this contradicts the principle of democracy. And democratic education has demonstrated that great ability, ranging from high talent to genius, does appear in all classes and may be developed to render eminent service to the whole society. This is one of the most important results of our study.

Our history has shown, thirdly, that the desire for education and the ability to secure an education do not end with childhood or youth but that, when proper opportunity is offered, they continue far into maturity and even into old age.

We have seen also that the functions, materials, and methods of education are indefinitely adaptable to the changing needs of individuals and society. The great range of the adaptations which have been made is best seen in the materials of education and could readily be shown graphically by a comparison of the very simple curriculum of ancient Greece with the multifarious offerings of the present-day schools and extraschool agencies. Such a curricular display would also provide a good starting point for a study of the adaptations in the functions and methods of education; and such a study on any well-selected portions of it would furnish useful exercises for the student.

The spread of education to almost all the people and its adaptation to their various needs and capacities have been carried out with eminent success in the United States. We have had not twenty-five but only three centuries of organized education; but building upon the work which had been done in Europe, we have democratized opportunity far more than the mother countries. Their schools provide limited opportunities for the children of the common people, while ours open wide the doors of our sec-

ondary schools and colleges. To continue in American schools beyond the compulsory age it is not necessary to pass rigid external examinations in foreign languages and advanced mathematics, nor to belong to a privileged class, nor to be endowed with genius or near-genius, nor to have the money that would be needed to attend a boarding school at a distance from home. Our material resources, the absence of stratified social classes, and the existence of democratic ideals have given us the opportunity in this country to build a democratic school system. We have built such a system. Millions of American youth, who under a more rigid system would have been eliminated from school at thirteen or fourteen, have been enabled to continue far beyond those years to make up the deficiencies resulting from earlier lack of opportunity or from misfortune. Genius and mediocrity, special ability, and the average capacity of average children have alike been given the opportunity to develop in American schools.

The political and social as well as the individual rewards of this policy have been great. In the main, our schools have cultivated tolerance and common understanding instead of prejudice, and have promoted national unity. Along with our opportunities we have had great problems: to Americanize millions of immigrants, to teach the Negro in a none too genial atmosphere, and to reach a widely scattered and often mobile population. The American system has not done its work perfectly, but we have done a great deal to solve these problems; we have made and are still making progress. American teachers should take care to understand these ideals and should properly value the success of our educational efforts. They should teach their children in the schools, and should also teach the public whom the schools serve, that American education has not failed. They should build up a public opinion which will not allow education to fail in the tasks which will continue to confront it.

The greatest task that confronts us is the more complete development of educational opportunity without restriction on account of wealth, location, and race. The poor child, the child in the isolated region, the foreign-born, the Mexicans, Japanese, and Negroes, do not always, in the United States, have the equal opportunities which our philosophy upholds and which the Constitution guarantees. Until they do, our system will be but imperfectly democratic. The fault is not the fault of the school alone. We are trying to build a democratic scheme of education in a still imperfectly democratized society.

The creation and maintenance of greater local community interest in schools is one means to greater educational democracy. The opportunity for local interest to express itself already exists and it is only necessary that it shall be strong, intelligent, and social-minded. Our study has shown the gradual development of separate educational powers and their assign-

ment to different units and agencies, to the local school district, to the state, and to a slight degree in the United States to the national government. A similar separation has developed in all the Western countries, but the distribution and assignment of powers among these or similar units varies greatly in the various countries. England and the United States give far more power to the local community to order its own educational affairs than most countries do. If our schools are to remain the agency of the people as well as of the government—and in the interests of continued and increased democracy they should so remain—this local autonomy must be jealously preserved.

Within the organized systems of schools the activity of voluntary agencies is another leading resource of democracy. In the United States more than in other countries, such agencies as teachers' societies, the regional associations of secondary schools and colleges, the North Central Association, for example, professional groups such as the faculties of teachers' colleges, parent-teacher associations, alumni bodies, and other voluntary, extralegal groups have had great influence upon educational development. One would not claim that all their actions have been wise, but in the main they have tended to bring school and society together and have provided means for the nonlegislative direction of education. The continued success of this self-regulation depends upon continued freedom of discussion and publication, upon tolerance, mutual helpfulness, and the wise use by these groups of their influence. In many countries all functions such as those of the regional standardizing associations are exercised directly by the government. In a democracy, government itself should as far as possible regulate by discussion and common agreement rather than by edict; and in the United States progress in this direction also has been made. To the voluntary groups one may, therefore, not unfitly add the state departments of education which, although they are governmental agencies, have often exercised their powers in an admirably democratic and cooperative spirit.

Our history shows that schools throughout the world have greatly expanded their functions. The expansion has resulted from the growing need to help individuals adjust themselves to an increasingly complex society and, in free countries, to lead them to work for self-development and the continued improvement of society. In a free society the individual has the privilege and duty of making his own adjustment and contribution. If the government should select and train each of its subjects for a particular station and life-work, education could be standardized, rigidly organized, and in fact could be reduced to training as in an army; but the army is not an example of a free society. For individual choice each person must know what opportunities exist and what latent powers he possesses and it be-

comes the function of the schools to reveal these facts to him. Social changes also tend to expand the functions of the schools, and vocational changes are one major form of social change. In earlier times a youth could select a vocation and could follow it with little readaptation throughout his life. Today, not only are vocations often more complex at the start but they also change rapidly. Such change and specialization not only require specialized education for a vocation but they also demand a broader general education to begin with, so that the individual may more readily make needed readjustments to his work and to other social change.

This expansion of educational activities has been necessary and useful and it must continue as new ways of living develop. Are there any social limits to control this expansion or should the school assume the functions of the home, the church, and the state? There are those educators who profess to see no limits to the functions which the schools should undertake. The public schools, they point out, should serve the whole people and should be used to promote the general welfare in every direction. But we should recall that the school in a national system is an agency not only of the people but also of the government and that, even in a democracy, government and people are not one, nor are they always in agreement. No government is completely responsive to the popular will and governments act while the people make up their minds slowly. If the schools should expand their functions indefinitely, should not government also do so? On this view would not society be completely "politicized" and would not absolutism be the inevitable result?

Democracy, on the contrary, respects minority opinion and provides reasonable freedom for private action. This implies limitation of the power of government and of the functions of the schools. No one is wise enough to settle the content of the good life out of hand or to predict the ultimate consequences of present action. Democracy implies improvement bit by bit through continued experimentation both in education and in government. And the recent lessons of fascist, communist, and democratic countries seem to confirm this wisdom of the ages. We believe that democracy within legal safeguards and limitations has the best chance to provide not only for security but also for freedom and progress. What the limits should be is a problem beyond the scope of this book; but, again, the details of this question would provide appropriate problems for student investigation and consideration.

We shall be a little more specific. Among the problems for student investigation one may mention education in regard to religion, race, sex, juvenile delinquency, capital-labor conflicts, and vocational education, to take only a few. Among the principles to be considered are the following: the school should respect well-defined community opinion; the school

should not teach what the law or the Constitution prohibits; the school should not teach what is being better taught by the other agencies, although it may under appropriate conditions support such outside teaching; and the school should not attempt what it is not able to teach with reasonable effectiveness. Students would benefit from a consideration, in the light of history, of these and other problems and principles. They should be considered and not accepted or rejected without consideration.

One brief illustration may be given to make the method concrete. We shall take the question of religious education. In some communities there is no settled opinion on this question. Protestants of various denominations, Catholics, Jews, and opponents of all religion disagree among themselves. And it may be held that the public schools are debarred from teaching religion by the first amendment to the Constitution, by law in about a dozen states, and generally, by tradition. If religion may not be taught, may any general view of life be inculcated since any such view usually involves an attitude toward religion? But can we teach at all, and particularly can we teach literature, history, or science, without implying a philosophy and ultimately a religious attitude? If the schools may not teach religion directly, is it a solution to "release" school time for the private teaching of religion as many schools are doing; and should course credit be given? How effective is the French teaching of secular morals? Should the private and parochial schools be allowed to share in public funds as is done in England? Such a study would show how history and tradition, philosophy, politics, and administration are involved in the consideration of any complex public policy; and would show also how policy has changed and is changing. In such a study the pupils must be allowed to reach their own conclusions, although the teacher also is to be permitted to express his views and reasons.

Education is not an independent or self-dependent activity, but it is dependent upon general social conditions. Opportunity for education is not created or controlled by those who benefit most, and most directly, from it. It is provided by the present for the next generation, by adults for the immature, by the rich for the poor, by society for the individual. In the long run it is the most important of all social interests; but in the short run it yields precedence to more immediately urgent demands. Only in a healthy, far-sighted, and altruistic society can education continue to prosper. For the defense of the educational opportunity of children and youth, a deeper and broader adult education is indispensable.

History teaches that improvements in education do not, of their own nature and by their own power, spread and conquer the earth. Amos Eaton in young manhood began to teach botany in the field and was highly commended for his enterprise. The new plan seemed to be making an im-

pression. In his later years, after seeing several editions of his *Manual of Botany* through the press, he reported that fieldwork in that subject had declined rather than increased in his lifetime. For fifty years the student laboratory which he introduced about 1825 made little progress in American high schools and colleges. At the time when Eaton was beginning his remarkable career, the Hazelwood School of England, the Chauncey-Hall School and Alcott's Temple School, both in Boston, and the West-field State Normal School of Massachusetts exhibited some of the features of the most advanced schools of the present day. These did not conquer the earth but were neglected, forgotten, and rediscovered much later. They are not spreading very rapidly now.

Improvements in education cannot even be expected to maintain themselves automatically. The gains of one period may turn to loss in the next. Continued effort is needed to prevent such decline. The fair beginnings of the town schools in early Massachusetts were followed by the district system and that by a widespread return to the dame school and other forms of private education. And to take other and large-scale examples, learning declined, by almost insensible stages, from Augustan Rome to the dull and prosy fourth century and then plummeted down into the abyss of the Dark Ages when, in the most graphic figure of that iron time, it became impossible to frame hexameters in the presence of seven-foot barbarians. So also Athens was succeeded by Alexandria, and that in turn by decadent Byzantium. But you say these are ancient examples and it cannot happen now. Let us then consider Hitler's Germany in comparison with the boasted freedom of teaching and learning in the older, hospitable Germany; and let us take warning that a similar fate may not overtake those who are still free.

2. SOME CURRENT PROBLEMS

To hold the gains of the past is and will be a problem. To provide for a broad and rich elementary education and the free access of all to the secondary school is a major problem. We may continue to follow our democratic tradition and again we may not. Adequate funds are hard to secure now, and there may be more difficult times ahead. The United States has come out of World War II with a debt of two to three hundred billion dollars. This is equivalent to the total income of the country for two or three years when we are at the peak of production; and in a depression, our total income may fall from one hundred billion or more to forty billion or less. Even during the recent depression many voices were raised against the kindergarten, against music and art instruction and other "frills." Free secondary schooling was attacked. There may again be a

demand to reduce elementary schooling to the "fundamentals" and to limit high school opportunities to those who are to be "leaders." It may be urged again that the public should not support the schooling of those of "inferior" mentality beyond the age of fourteen or fifteen. Such persons, it may again be said, should be directed to trades by which they can support themselves, instead of adding to the public burdens.

The question is the fundamental one of whether we are and mean to remain a democracy. If a people expects to be ignorant and free, said the founding fathers, it expects what never was and never will be; and to this we may add the pertinent amendment that any part of the people, the laboring class, the farmers, the Negro, the poor, are deluding themselves if they expect to remain free without the knowledge which will enable them to preserve their rights. If we are to remain a democracy the people and the state must educate each child as if he were, as indeed he is, their own. When Rachel Macmillan protested against the class limitations of German education, the official to whom she spoke said: "What would you have? Do you want to send the children of workingmen to Oxford?" "Yes," she replied, "I think that is just what I do wish." This was the voice of democracy, although, quoting another English democrat, "Oxford may not be good enough for the children of the workingmen." We hold no brief for or against Oxford, but in a democracy the best that is possible must be provided for every child, and insofar as this is not done democracy suffers. It is no accident that American labor is concerned with this issue. Labor has long recognized that mere trade training would condemn labor's children to an inferior status. Democracy must resist the temptation to select only certain ones for education beyond their fourteenth year or to curtail the services of our elementary and high schools. That would be the road to autocracy and regimentation.

Our whole book has been mainly a record of progress. We have seen how education has been extended from the few boys of the ruling class in ancient Greece and Rome to include, at least in theory, all people of all classes, boys and girls, men and women, the whole population. We have shown how schooling has been expanded from a few school arts, such as reading, writing, and number, to include the whole range of the interests of modern man. This extension and this expansion have developed reciprocally. The one implies the other. As the sciences and arts were created and expanded, more people and new classes of people were drawn into the school. And, conversely, as education under the influence of nationalism and democracy was extended to the masses, the curricula had to be diversified to meet their needs. The history of education is the history of the improvement of education.

That is as it should be; but a warning is also implied in this record of

progress. Within the broad areas of progress there have always been islands of conservatism and reaction. Many schools today are as poor as the poor schools of a century or two centuries ago. From the history of education we should learn not only how we have succeeded but also where we have failed. This will lead us into the presence of some specific current problems. In these defects lie the opportunities of able teachers; this, if they realize it, is their chance to improve present policy and practice. Where, we shall therefore ask, have we failed?

We shall begin with a condition for which the reader has been prepared. Most school revenues are derived from taxation, and since school moneys are a portion of all public moneys, the schools are involved in the general question of public finance. School revenues are drawn from local, state, county, and federal sources; and that is, in general, the order of their magnitude. Three-fifths of all school revenues come from the local district or city, one-fourth from the state, and much smaller segments from the county and the federal government. But this general statement is almost meaningless because the proportions in each state vary from those in every other state. One state, Delaware, derives almost all school support from state taxes while in other states almost all support comes from the local units. In other words, there is little similarity in the tax systems and school allotments of the different states. One trend has been noticeable in the last decade; the percentages contributed by the states have in that time almost doubled. The consolidation of schools, the enlargement of local school districts, and the increase in the share of state support will tend to equalize both the tax burden and the possible educational services in the different sections of a given state.

We need both equalization of educational opportunity and stimulation for educational improvement. We therefore need a more scientific tax system and a method of revenue allocation that will provide better schools in the poorer districts and in the poorer states; and we need to encourage all school areas to provide the best possible schools. These are essential in the effort to provide a high level of education and a reasonable degree of equality of educational opportunity.

Four other principles should be followed in the financial administration of schools. The first is the principle of economy. All school moneys should be spent for services, and only for services, that produce adequate returns in the education of the children. All waste must be eliminated. The second is the principle of adequate contribution by the locality. To maintain local interest in the schools the locality should be required to contribute substantially to the support of its schools. Too little from the locality and too much from the state or nation would be undesirable. Thirdly, in times of

stress the schools should maintain all essential services. If kindergartens, health services, and music instruction, to take examples almost at random, are important at all they are more important during a depression. To save money during a stringency by cutting off such services *en bloc* without reducing the expenses for other services which are no more necessary is a short and easy but unjustifiable procedure. And lastly, the public schools have the obligation to inform the public of the needs, not of the schools but of the children. Schools have no needs; it is the children whom they teach that need money for their education. The great liberal Supreme Court Justice Oliver Wendell Holmes said, "By paying taxes we buy civilization." It is this that justifies the spending of money for schools. We must admit that our tax systems and our allocation of the resulting funds are often illogical and our expenditure of these moneys often unwise. How to improve in these matters is a serious problem for school people and the public.

With all our educational effort and financial expenditure, illiteracy is yet another problem in the United States; and the current estimate that only three per cent or four million of the people are unable to read and write is probably somewhat too optimistic. We are not alone in this, for France, England, and other countries have not achieved complete literacy. One who takes a still wider view will see large areas almost entirely illiterate, especially in Africa, India, China, and portions of South America and southern Europe. On the other hand the Scandinavian countries, Holland, and Germany have reduced illiteracy to a small fraction of one per cent of the population. In recent years a vigorous and largely successful attack upon the problem has been made by Russia which until 1918 had one of the highest proportions of illiteracy in Europe. Both effort and success have been less spectacular in the United States. In the middle decades of the nineteenth century illiteracy was growing faster than the population. Although this trend was reversed later, in 1880 seventeen per cent, and in 1890 thirteen per cent, of the population ten years old and over were still illiterate. These figures indicate the proportions of those who, according to the U. S. Census standard, could not read or write at all. In World War I the army used a different measure of literacy, namely, the ability to "read and understand the newspapers and to write a letter." By this higher standard, out of one and one-half million draftees who were tested in 1918, one-fourth were found illiterate. Great progress in the removal of illiteracy was made after the war and especially after 1933; but it is difficult to make exact comparisons because the word literacy and its opposite receive such various interpretations. And in the Census of 1940 the earlier form of the question was dropped and one on the number

of years of school attended was substituted. It should be noticed that the removal of illiteracy among adults is both less permanently effective and less valuable than the teaching of reading and writing to young children. Older people who acquire these arts often lose them again through disuse. Children retain them better and will be able to use them longer. This desirable degree of literacy will be attained when good schools exist everywhere and good attendance laws are well enforced in every state.

The removal of illiteracy is an obligation of the elementary school and, until all children of normal capacity have learned to read and write, the elementary school will not have completely fulfilled its primary functions. This consideration should not inhibit us from putting forth every effort to teach illiterate adults, but it should stimulate us to take all possible measures to teach effective reading and writing to all children, so that in the next generation there may not be any illiterate adults. Illiteracy is one of the problems of American education, and the army standard is not too high.

Literacy means the ability to read and write, but this ability varies from the reading and writing of a first-grade child to that of John Quincy Adams or James Russell Lowell. Reading, writing, and speaking are the most important branches of intellectual education at every level. There is evidence that many high school pupils can read no better than the median fourth- or fifth-grade child. Many college students also suffer because they cannot read rapidly, attentively, and analytically. They attempt to read an assignment in physics or history and get vague impressions instead of accurate knowledge and clear ideas.

Books on different subjects and within the same subject differ in reading difficulty and must be read in appropriate ways. One does not read a novel, narrative, description, an expository passage, or a scientific demonstration in the same way. Frequently in attacking a new subject such as philosophy, or literary criticism, or an unfamiliar science, a whole new vocabulary has to be mastered. Students fail to read effectively because they do not grasp the meanings of technical terms or because they cannot read graphs or tables. On the other hand we need to learn not only how to read books but also how to use them without reading them from cover to cover. Often the reader must go to other books than the one before him to get a more complete understanding of what he is attempting to read. All through life if one means to grow, the reader must continue to learn how to read. And the same remark applies to writing. These are not skills that one acquires and perfects in the elementary school and then lays on the shelf. It was Carlyle who said, "The true university of these days is a collection of books." While this is not an adequate definition of the university, there is a point in Carlyle's statement that is applicable to the present topic. A truer view of the university is Newman's, that it is a company of scholars,

scientists, and students. And in such a company, libraries are as important as laboratories, although both are essential.

There may be observed today a tendency to disparage the use of books in education. This cry is as old as Rousseau and some so-called progressive schools have re-echoed it. It is one of the worst of Rousseau's many errors. We need not fewer books but more and better ones in the schools and we need to learn to use them with despatch and intelligence. It is even useful to be able to read books in more than one language, which is also contrary to a widespread American opinion, for it is simply not true that all important works are quickly translated into English. In the field of this textbook there are, for a beginning, Specht, Pinloche, Paulsen, and D'Irsay, whose indispensable works have not been translated into English. Basedow and Pestalozzi have not been fully and accurately translated into English. The writer does not know but he has reason to suspect that the same situation prevails in most fields. But we are here speaking of learning to read English books, reading them for comprehension. We need more and better books in schools, including better textbooks. We need to learn how to use textbooks. They are not original sources but outlines, summaries, compendiums, guides, and should lead the student to the sources. It is true, and good teachers have long known, that children need first-hand experience, but no one can have or should covet all the first-hand experience that would be needed for a decent understanding of nature and life. For that we must go to books as well as to nature and life. One of the tasks that all teachers at all levels should seriously undertake is the teaching of reading, for as we said in the beginning, there is evidence that many students at all levels cannot read well enough for their purposes.

The improvement of education depends, very much, upon the employment of better teachers and the maintenance of better teaching conditions; but these betterments depend in turn upon the selection and preparation of good human material for the profession, the improvement of the social standing of teachers, and increased financial rewards for teaching. "As the teacher, so the school" is an old but irritating proverb. It is irritating because it is only partly true, for even the ideal worker, to quote another partly true proverb, "cannot make bricks without straw." To produce the best results a teacher needs good equipment, "freedom from fear and want," and a helpful community. An ideal teacher can do something but not everything to secure and develop these necessary conditions. We shall here consider chiefly the selection and preparation of good teachers for American schools.

The selection of candidates for the teaching profession is itself a thorny problem. People do and should select their own life-work. They must not

be drafted. The numerous teacher preparing agencies, that is, the normal schools, teachers' colleges, and departments and colleges of education all desire large enrollments, and this desire conflicts with the desire to raise their admission standards. About thirty years ago the medical profession faced a similar condition, but through the report on medical education by Abraham Flexner and the measures which were taken in consequence of that report the medical schools raised their standards to a higher level. Perhaps schools for teachers will sometime achieve a similar result; but there are many difficulties standing in the way. One of these difficulties is that the qualifications of teachers cannot be stated in simple, concrete terms. They are not qualities and characteristics that can be readily measured.

The prospective teacher should have good character and a warm, enthusiastic personality, but not too enthusiastic, for the teacher must also be a realist and a scientist. Intellectual capacity, interest in people, facility in speech and ability in exposition, a variety of skills in such arts as drawing, music, and construction work are other desirable characteristics. This list is incomplete but it must do for the present purpose. There is no evidence that candidates for teaching usually have these abilities and qualities in larger measure than future architects or engineers; but there is some evidence that they have on the average less intellectual capacity than college students as a whole. Little is at present done to select the best persons for teaching, nor do we really know how they could be identified.

If we had excellent means for making the selection it is not certain that those chosen could be persuaded to prepare for, enter upon, and remain in the profession. All these fine qualities are desired for a possible wage which may rise to three or four thousand dollars a year but is likely to remain far below those figures and may sink to five or six hundred dollars, which is the average in some whole states. This last remark means that there are thousands of teachers who receive less than the lowest of those figures. The average salary of elementary and secondary teachers is somewhat below the annual earnings of skilled artisans. The rewards of teaching are not wholly financial but this applies to other professions also. These likewise have their intangible rewards, and teaching has to compete for candidates with these other vocations.

For the reasons already suggested and because a large proportion of all teachers are women who plan to marry and become homemakers, teaching is a very unstable profession. About one hundred thousand new teachers are employed each year in normal times to maintain a total teaching force of about one million. This indicates that the average teaching life is about ten years; and it is shortest, about five years, in the one-teacher rural schools and longest, about fifteen years, in the large city

school systems. Further, many teachers change positions after one or more years so that each year one-fifth of all teachers are "new" in the positions they occupy, that is, they are either entering the profession for the first time, or they have just moved from some other position to the present one. It is doubtful whether one is entitled to designate by the word profession, a vocation in which such conditions obtain.

The foregoing will also explain why the education of teachers has not been raised to a higher level. Since teachers should, first of all, be broadly educated persons and since four years beyond the high school is about all that the profession is able to pay for, that is what we have. Well-educated teachers have a college degree. Three-fourths of the college work has been in the broad academic fields and one-fourth in courses in educational psychology and philosophy and in methods of teaching, to which some work with children in schools and social agencies and a little practice teaching have been added. The historian has no insuperable difficulty in explaining how these conditions have developed. The broad outlines are already before us; and the problems of securing a more careful selection of candidates, more extended and more practical education, longer periods of professional service, and adequate salaries are easily stated. Their solution depends upon far-reaching changes in public opinion; and these the leaders in the teaching profession can help to initiate and bring about. A great deal has been done in the last one hundred years, but, as we said in Chapter 18, more is waiting to be done.

Are American teachers free to teach what they think children ought to be taught? Not altogether, and it is not likely that they ever will be. Politics, religion, sex, economics, and race are all areas in which teachers with ideas that conflict with the dominant opinion of their communities must tread warily. But if teachers were more fully informed and better able to present arguments persuasively, much could be done in developing clear and intelligent opinion on such debatable questions. There is evidence that teachers are not aware of the issues, or interested in them, or competent to handle them effectively. This points to another defect in our teacher education.

Juvenile delinquency is one of the persistent problems with which schools have to deal, and as a result of World War II it is said to be increasing. According to the Federal Children's Bureau, juvenile delinquency declined steadily but slowly from 1929 to 1939 but is now rising again. Other evidence indicates that truancy from school has increased sharply not only in the city but also in the rural schools, but the more serious offenses seem to be growing most rapidly in large cities. This is a persistent problem with which schools must always deal.

If the schools had the staffs to keep their playgrounds and gymnasiums open all day and every evening, if they could direct more club work and if every school had a junior republic, a great deal of delinquency could be prevented. The junior republic for student self-government was developed by William B. George in 1895, fifteen years before the Boy Scout movement, and was used by him in reforming young offenders from New York City. It has since been tried in many places, often successfully and notably so in Boy's Town, Nebraska. But no simple means can meet all needs; and all agencies such as the home, the church, and the courts should coordinate their plans and cooperate in carrying them through. The problem is a community problem and should be attacked by the whole community.

Such an effort is under way in St. Paul, Minnesota. The essence of the St. Paul project and of similar efforts elsewhere is in the coordination of all agencies for the improvement of the environment and the guidance of youth. Under this plan the police and the juvenile court cooperate with the schools, the social agencies, the homes, and all the welfare institutions. They have case workers, visiting teachers, and a psychiatrist; and they keep a complete system of records. In such a program the school is of great importance. The school has charge of the boys and girls for more hours a week than any other institution except the home. Its program should teach good conduct by precept, example, and practice, especially by practice. If it could expand its activities into the evenings and the summers, there would be less time for the children to get into mischief; and they would be better fitted to resist temptation.

Personal growth and development, which is education in a profound sense of the word, is a lifelong process. Only an introduction to this process can be provided by the schools of childhood and youth. This is an old idea. The guardians of Plato's Republic continued their formal education to the age of thirty-five and they were expected to continue their study into later life, for in old age they were to be the counselors of the state. This has also been the actual practice of scholars and professional men in both ancient and modern times. In his *Brutus*, Cicero has left an account of his assiduous pursuit of knowledge and wisdom throughout his active years, and after his enforced retirement he transferred to his own people and language much of the thought of the Greek statesmen and philosophers. In recent times, however, the ideal of a more general adult education, of opportunity for continued study beyond the ordinary school-days by the working and business classes, has hovered before the minds of statesmen and educators. Condorcet incorporated such a plan in his report to the Legislative Assembly of France. Since then schemes of adult education have developed independently or have been fostered by govern-

ments in many countries. One of the most admirable and effective is the array of Folk High Schools in Denmark which carried out the ideas of N. F. S. Grundtvig (1783-1872). It is credibly held that these schools greatly aided in the agricultural, economic, and national rehabilitation of the country, after its decline in the eighteenth century. Other forms are the English mechanics' institutes fostered by George Birkbeck and the tutorial classes which grew out of the cooperative movement and led to the establishment in 1903 of the Workers' Education Association. Each of these latter has had an American parallel also.

In the United States adult education has had a long and varied history. It may be taken to have begun in the private evening schools of the eighteenth century which often taught surveying, navigation, and bookkeeping to ambitious young men. The lyceum, the Chautauqua Institution, and university extension developed in the nineteenth century; and in our own day many new forms have arisen. One of these forms which though old has been greatly extended is the public night school in the high schools of large cities. Some cities, New York, for example, through its department of adult education, also offer day courses for those who cannot attend in the evening. Correspondence courses were offered in 1873, and it is said that there are today in the United States three hundred correspondence schools offering twenty-five thousand different home study courses. The schools are of all grades of competence and even honesty; and only a minority are members of the National Home Study Council which was organized in 1926 to protect the students and the reputable schools. The government offers correspondence courses to men in the armed forces through its United States Armed Forces Institute. The public forum and town meeting type of adult education have developed rapidly in the last decade. Emergency Federal Education for Adults which was developing during the depression included the Civilian Conservation Corps and the National Youth Administration scholarship and work projects, although it may be questioned whether these should be included under adult education. The latter was especially intended to aid school attendance in regular classes. In 1926 the American Adult Education Association was formed to coordinate activities in this field. This is a voluntary and private body. One of its achievements is the publication of the *Journal of Adult Education*.

Opportunity for adult education is important in a democratic society, and in every society which wishes to enable its members to change their status and vocation and to encourage their personal development. It has at least four well-defined and important functions in the United States. It can enable many men and women to supplement and amplify the inadequate schooling of childhood and youth. It can reach down to those

who need to attain literacy and up to those who wish to complete a high school or college education. It can provide vocational education for new or better positions to those who wish to change their vocations or to progress in vocations already undertaken. It offers opportunity for advancement or for the attainment of purposes which develop in adult life. It can aid the fuller understanding of public questions and fuller participation in the democratic process.

This is one of its most important questions. There are perhaps no people who do not need more education and re-education in politics, economics, and international affairs. Schools and colleges may make a beginning in these matters, but this is a field in which old information and even old principles must be continually re-examined in the light of changing conditions and views. To offer some examples for the sake of concreteness, the national debt, administrative law, and adult education itself are three topics which should be carefully studied by our citizens. Our hope of continuing as a democracy makes these and other questions urgent now.

Lastly, adult education can provide opportunity for a continuance of liberal education and the enrichment of one's personal life; and this is not the least of its possible services. Books, newspapers, magazines, and the radio are all valuable means to mental growth and alertness, but most people need also a program, guidance, and the challenge of paper work and discussion. Adult education in its various forms can furnish these. It needs more systematic development and coordination.

Two areas of adult education are of special importance today. These are education in the conduct and development of our public school systems and education in the conduct of our international relations. The former we shall treat briefly here and the latter in the next section.

The American school board is a unique institution. No other country has anything quite like it. These boards have evolved in three hundred years of experience, growing out of the town meeting in New England and the neighborhood schools in other parts of the country. When the states began to develop the public school system, laws which provided for schools also created the local boards composed of laymen and elected by the voters.

The principle is doubtless sound that American public schools should be controlled by laymen, ordinary citizens of the community, chosen by the community. But the office demands some special qualifications also. The board members should have or develop a growing conception of the purposes and means of education in our country, and of their own functions and duties as school directors; and they should be devoted to the cause of an improved public education. This implies a great deal of knowledge that is not obtained in ordinary business experience or the practice of a profes-

sion. Occasional attempts have been and are made to improve the understanding and vision of school board members through forums, books, and pamphlets. Just now (1944) the Illinois Association of School Boards is developing a state-wide plan for the self-education, in their duties and opportunities, of the laymen entrusted with the management of public education in that state. This has, without exaggeration, been called "one of the most significant developments in education today." It should become universal.

There is a further opportunity which has been almost entirely neglected. All the children in the schools will become patrons and to some degree directors of education, merely as voters, whether they become members of school boards or not. The schools should interpret to the children in school the meaning and functions of public education. The schools now teach history but not the history of education, economics but not the economics of public education, politics but not the politics of public education, and so on to the end of the list. Children should not be allowed to leave our schools without some understanding of our great adventure in the education of a whole people, by the people. While this would not be adult education it would furnish an introduction to an interest which deserves and needs the life-time study of all citizens.

3. THE INTERNATIONAL SITUATION

One great issue that confronts democratic education today has arisen from the presence in the world of the provocative ideologies of Fascism, Communism, and National Socialism. The issue is affecting American education and politics in two ways. First, in their attempts to conquer the world and convert all peoples to their views, the countries in which these ideologies prevailed adopted the policy of attempting to subvert democracy in foreign countries. They have, for example, fostered such agencies as the German Bund and the Third International in the United States, and by secretly subversive means, by "boring from within," they have tried to undermine both education and the democratic political process. All this stems from the fact that in those countries education has become both overt and secret political propaganda to an extent and degree that had never been known before. The school systems have been taken over by a political party and used to indoctrinate the young in partisan principles without allowing a hearing to any divergent views or arguments. This is what is meant when it is said that such schools have been "politicized."

The second way in which the issue affects democratic education is even more subtle and dangerous. The ease with which the youth of Germany have been exploited and have been converted from their former prin-

ciples of international peace and collaboration to the principle of military aggression will not be readily forgotten by the rest of the world. Democracy, openmindedness, the constant search for wisdom with knowledge, and cooperation are hard to achieve and to maintain. With the object-lessons before us in the methods which have been used to destroy these great social and intellectual virtues abroad, they will be still harder to cultivate at home. No greater task faces the American schools today.

The defeat of the Axis does not by itself assure the peace of the world or the welfare of its peoples. The old conditions, ignorance, prejudice, and suspicion, and the will to dominate, will remain not only in the aggressor nations but in others also until they are replaced by national and international justice, understanding, and humanity everywhere. In bringing about such difficult and far-reaching changes the schools of the world have a part to play. And since the nations and their school systems will remain, the first task will be to change the spirit of their teaching, to make it not less patriotic but more intelligently patriotic and less chauvinistic. The schools of all countries must teach the elements of foreign affairs and international relations in the spirit of reconciliation and cooperation.

We may, first, look at American education from this standpoint. The present generation has unusual opportunities to study the foreign affairs and the international relations of the United States, if it has the knowledge and training to take advantage of the available facilities. In public forums and town meetings, by means of the radio, magazines, and journals of opinion, through newspapers and a constant stream of books, the American people are offered information, ideas, and plans on war and peace, security, health, education, and economic stability. The relations of our government and people to the other governments and peoples of the world are among the most frequently discussed topics of the day.

No previous generation has had so urgent a need to understand international relations. We have of course from the beginning of our national existence been involved with other nations in the struggle for security, opportunity, power, and supremacy; but these involvements are becoming closer, more threatening, and their solutions more critical. We may perhaps summarize what would be a long argument in the phrase that as war has become global so peace, if there is to be a firm peace, must also be global. And it can hardly be denied that the American people should begin in the schools to develop a realistic understanding of our existing foreign policy and also of the foreign policy to which they mean to give their allegiance.

Do the schools provide such an understanding? It is probably true, even today, that the schools teach, in the main, what is in the textbooks they use;

or of European and world history, seem to deal with these matters mainly in the past tense and by a factual recitation of what once happened; and they deal with them too much from an internal, nationalist standpoint. They should be dealt with more internationally and dynamically as the basic considerations in the study of present and emerging problems. The American people, as we have said, will be concerned more and more with the development of national policy in a world in which even our internal affairs will be matters of international concern. Our "splendid isolation" is gone. The schools must teach the A. B. C.'s of international relations that youth may early learn to understand the world in which they will live.

4. EDUCATION FOR A NEW SOCIAL ORDER: RUSSIA

Although we do not have space to consider many countries separately or to consider the Russian experiment fully, Russia, because of the novelty of her program and the excellence of many of the results already achieved, cannot be altogether omitted. Russia is also one of the most powerful nations in the world, and her relations with the West are growing in number and difficulty.

The Russian educational system did not take its present form immediately after the Revolution, and the older accounts no longer describe present conditions. Because of the strict censorship and Party-Control one can not be certain of present conditions, but in its aims Soviet education has changed less than in its standards and administration. The basic purpose still is the state promotion of Communism or Marxian Socialism, although now the aim is said to be socialism at home instead of world revolution. The schools are used for the elimination of social classes and to provide equal opportunities for men and women. As one of the means, Russia has laid great emphasis upon scientific and technical education. More recently history has come in for much greater attention and the scope of the history that is taught has been broadened. Although it may seem to conflict with the one-class idea, scientific and technical experts and intellectuals receive higher rates of pay than less skilled workers. Because Russia has no "free enterprise" the same reasons for child labor and child exploitation which disturb capitalist societies do not exist in Russia; but the state may exploit children and, perhaps, has done so during the present war.

School education under the complete control of the state is regarded as one of the most effective means of building the new social order. But there is also, in all countries, an education outside the schools. Both informal and formal education is carried on by business firms, societies, newspapers, theaters, governmental agencies, and many others. This is true in Russia, but there all of these activities are themselves conducted not merely under

government regulation but directly by the state, that is the Communist Party, and the education or propaganda which they conduct is carried on upon a set plan. Soviet leaders say this increases "the efficiency of the system in its parts and as a whole." True; but it also prevents divergent ideas and information from creeping in and raising questions. In the new Russian anthem, which is to replace the *Internationale*, the Soviet land is called a "republic of the free"; but that freedom, one may hold, should include some freedom to choose one's ideas. There is some evidence that as she has changed in other directions so in this also Russia may make concessions. Thus, since 1932 the Russian novelists and poets have been given greater freedom to write as they please but they still may not attack the Communist system of thought and policy.

Russia in a quarter of a century, a much shorter time than other countries required, has developed a remarkable school system. If we leave out the special schools for a moment, the Russian system consists of the kindergartens and other preschool agencies, the four-year elementary schools between the ages of eight and twelve, the secondary schools which take youth to eighteen, the two-year and also higher schools for teachers, the technical schools and the universities. The Russian schools claim to provide equal opportunities for boys and girls, men and women. And they achieved this equality in the same way as other countries by first opening the same classes to girls as to boys; and then in 1943, the capacity of women to fill men's jobs having been demonstrated, they abandoned coeducation in most secondary schools to give more attention to home economics and other studies that appeal especially to women. Another explanation is that they abandoned coeducation to provide military training for boys. Coeducation is retained in the elementary and in small secondary schools. Besides this main system there are special schools for the handicapped, part-time schools and technicums for employed adolescents and adults, schools for the removal of illiteracy, and intermediate and higher schools for training Communist Party leaders. Education in the elementary school became compulsory in 1931, and not only is it free in all schools, lower and higher, but many pupils and students receive state financial aid while in attendance. In that vast country, illiteracy has been reduced from about sixty per cent at the Revolution to about ten per cent; but such figures must be accepted with caution if only because illiteracy is a vague term. The change has been great and is the more remarkable because about one hundred languages are spoken in the Soviet Union. The government, which supplies all textbooks, prints these in ninety languages. Russian is taught as a "foreign language" in schools in which some other speech is the vernacular tongue.

Kindergartens are organized for children between the ages of three and seven to provide social and health education and to free the mothers for

other work. In the cities seventy per cent of the children of suitable age are said to attend the kindergartens, and the average for the whole country is about thirty per cent. The elementary school of four years is followed by a secondary school of six years. In the lower schools language, arithmetic, nature study, history, geography, drawing, handwork, singing, and gymnastics are taught, and to these subjects the secondary schools add mathematics through trigonometry, physics, chemistry, geology and mineralogy, social studies, foreign languages, and military studies. The elementary pupils have twenty forty-five-minute lessons a week and the secondary school pupils, twenty-seven. The school year is longer than in most countries, extending to two hundred and thirty days in some city schools.

In the period following the Revolution the immediate need for trained scientists, technicians, and mechanics was urgent, especially in the Ukrainian Republic with its resources of materials and power. It was decided to emphasize vocational education and to develop special schools to be closely associated with the factorics, collective farms, and state departments in which the present students would later carry on their life-work. The schools that were established in the factories themselves and closely integrated with production were called *Rabfaks*. Means for hastening the process had to be found. The peasants and workers, many of whom had had little educational opportunity, were not prepared to undertake the study of science or of the technology which was based upon science. Many were practically illiterate, unable to do ordinary arithmetic and unacquainted with the elementary concepts and methods of science. The *Rabfaks* were hurriedly established. They used neither entrance nor final examinations and no tests in between. The results were as poor as one would expect. They have since then been greatly improved and now maintain good standards.

The Revolution was a proletarian movement. Workers and leaders were to be transformed quickly into Communists. All schools were required to emphasize social and political as well as general or vocational studies and to lead in the attack upon "religious superstition." To secure this new orientation it was necessary to overcome the hostility of the previous bourgeois teachers and professors to the new regime. Lenin advised the proletarian students to learn something every day from the bourgeois teachers, for there were few others, but never to trust them. The Communist Party developed a policy of supervising the instruction to make certain that it would follow the party line. The administration of the schools was placed in the hands of the local "cells" of the Komsomol, and the students were charged to participate in every phase of student and school administration. They took charge of the discipline, the curriculum, and the financial management of the schools. The student leaders became so active in all these

affairs that they no longer had any time to study. An open door policy of admission to schools was followed, and all state examinations, certificates, and diplomas were abolished. Such a policy was perhaps necessary if the purpose was to get as large numbers into the schools in as short a time as possible.

By 1923, one-tenth of all students in higher, technical, and vocational schools belonged to the working classes, which is about the proportion that obtains in the United States; but by 1933, seventy per cent of the Russian students in the same schools were proletarians. In reading these figures it must be remembered that by the latter date most Russians were proletarians according to their own classification. In actual numbers, also, the Russian enrollment in such institutions had exceeded that of the United States; but again no exact comparison is possible, for the higher institutions of the two countries are not identical. In its purpose to bring educational opportunity to the masses, the Soviet Union had succeeded overwhelmingly. In the latter years Russia has spent ten per cent of its national income for schools.

With respect to thoroughness the results were not good. The control of the administration of the schools by the youth organizations and even their direct participation were withdrawn in 1928 and more completely in following years. The teachers, most of them now loyal Communists, were again put in charge, the students were asked to study and not to meddle in the management, and a good word was said for strict discipline. It was found that the schools of the first decade had failed to teach thoroughly the essential elements of the sciences and mathematics, of the native language, and of history and geography. Work in ancient and medieval history which had been discarded was again introduced. The grading of the pupils, set examinations, and higher standards of work were demanded. The schools were required to use textbooks which the state furnished. The *Rabfaks* now did good work. This conservative and "academic" trend became still more pronounced between 1933 and 1936.

Such a reversal in the educational policy of a nation demands a more detailed analysis and statement. The Central Committee of the Communist Party of the Soviet Union in 1931 protested against "the introduction on a mass scale of methods not tested in practice, especially the so-called project method" and declared that "the attempt to make this project method the basis of all the work of the schools had actually led to the ruin of the schools." A year later they again complained of insufficient programs, poor methods of teaching, and lax discipline, and even the total absence of discipline and order in the schools. The "laboratory brigade method" and a "collectivized version" of the Dalton Plan, it was said, led to lack of personal responsibility in study, a minimizing of the teacher's

function, and failure to check the work of the individual students. The Committee decreed that the studies should be organized principally in the form of lessons given to a definite group of pupils, that the pupils should be individually rated at regular intervals, and that examinations should be conducted at the end of each school year. Between 1933 and 1935, the Central Committee of the C.P.S.U. and the Council of People's Commissars made the use of standard textbooks compulsory and condemned the substitution for standard texts of loose-leaf textbooks and work books, prohibited the interference with school work and management by the Young Pioneers, called for new history textbooks which were to present factual material in a strictly chronological order instead of "abstract sociological schemes," emphasized the systematic teaching of physical geography, decreed the complete removal of pedologists with their harmful intelligence tests, and guaranteed the sole rights of teachers in the management of the schools.

The last decree should be explained. Pedology or paidology means child psychology, and it appears that the school psychologists or pedologists interfered with the teachers' placement of the pupils and with the instruction. Soviet opposition to pedology may be interpreted by a quotation from one of their own authorities, who wrote that pedology "had uncritically adopted reactionary and nonscientific theories evolved abroad to the effect that a child's fate is irrevocably determined by heredity and by unalterable environment, and neglected the powerful factor of Socialist education, the effectiveness of which is constantly increasing under the conditions of the new social order. It generally applied standardized mechanical measurement of children's intelligence and achievements and other methods leading to various false, pseudo-scientific conclusions in theory and to measures harmful to the children and the schools in practice. It was therefore determined to denounce and condemn pedology, eliminating its practical application and to fully reinstate educational science and the educationists in their rights and to embark on the elaboration of a Marxist child study on a genuinely scientific basis."

The Russian experiment was begun in revolutionary times with great enthusiasm but under unfavorable circumstances. The people were to a great extent illiterate and the autocratic regime under which they had lived had given them little preparation for the reasonable and responsible exercise of freedom. With teachers who were educated and experienced in formal methods and with many untrained and inexperienced teachers, they introduced methods and a degree of pupil participation that can be used successfully only under favorable circumstances and by a skilled and thoroughly experienced staff. It is no wonder that they failed; and now they have perhaps reversed themselves too radically. Or it may be that the

true explanation for the educational reaction is a more sinister one. Such an interpretation is given by American correspondents, such as William Henry Chamberlin, who lived in Russia many years, and by Russian emigrés, such as Victor Kravchenko (*I Chose Freedom*, Scribner's, 1946). Such interpreters describe the Russia of today as an iron-bound police-state and her new education as old slavery. Censorship prevents the outside world from learning the truth.

5. EDUCATION FOR AGGRESSION: NAZI GERMANY

The change in the German schools in the last decade was even more profound than in those of Russia. German education under the Republic was to be liberal and conciliatory, but there was substituted for that attitude the National Socialist idea of an Absolute State of the Herren-Volk. The absolutism of this racial state covered all fields including education, and there could be no freedom of teaching, printing, or other forms of communication. The new charter of the school is to be found in Hitler's *Mein Kampf*. There we read that the chief aim of education is to train the will and to develop an iron determination, although the main appeal is to the least admirable emotions. The young German must be taught to obey and to submit, even to injustice, without whimpering. The intellectual aspects of schooling, the "so-called wisdom," are of secondary importance. The field of history is given special attention in *Mein Kampf*. Both national, that is political and military, history and cultural history must be taught to foster national and racial pride. But most important of all is physical education, for the racial state has no use for "peaceful aesthetes."

A close view of this new-old physical education is given in *Mein Kampf*. There we are told that, although education cannot turn a natural coward into a courageous man, yet the first cause of personal cowardice is physical weakness and unskillfulness. And this can be remedied. All of a boy's free time must be devoted to the useful training of his body. There must be no loafing in the streets or about the cinemas, but after his daily work he has to steel his young body so that life will not one day find him too soft. First emphasis has to be laid upon boxing. There is no other sport like this for developing the "spirit of aggression"; but above all the young healthy boy has to learn to be beaten. How far the conviction of physical efficiency, even in average people, promotes one's feeling of courage and wakens the spirit of aggression can be seen best in the army. The immortal spirit and the courage of aggression demonstrated by the German army in 1914 were the result of that untrifling education in the long, long years of peace and led to the most incredible achievements. The racial

state has to carry on physical education not only in school but also in postschool days when the army especially becomes the great teacher. We have thus reviewed Hitler's version of Spartan education brought back to life after more than two thousand years.

Germany, under National Socialism, was an example of a nation whose political capacity was unequal to her ambition. Bismarck, who was a sufficiently daring politician, nevertheless declared that "politics is the art of the possible," the art of cooperation and compromise and step-by-step progress toward a goal that can be accepted by both disputants. One might, of course, cynically remark that this was Bismarck's ideal only after Germany had become, for the moment, a "satiated state." But Hitler certainly preached that politics is the art of the impossible, the doctrine that by threats and force anything may be accomplished. We have, in Chapter 14, seen how German policy has vacillated between liberalism and absolutism. Hitler's program was an extreme case of absolutism aided by skillful propaganda. In his attempt to create a despotism in a civilized country in the twentieth century, he made use of the national school, and in the process education became simply propaganda.

The radical change introduced into the schools by National Socialism was not a change in administration but rather in the spirit and purpose of education. The aim was to destroy the liberalism of the Republic and to build up a new education which should be based upon the Hitler revolution. Yet there were also great administrative changes, especially in regard to personnel. The first step was the subordination of the teachers to the National Socialist will. Under the empire a large proportion of the teachers had belonged to the liberal parties, and during the Republic they tended to become still more liberal and even radical, a fact that did not escape the attention of the new leaders. A decree of July 11, 1933, enjoined teachers to subordinate their own demands to the common cause and to make themselves familiar with the principles of National Socialism, and especially with *Mein Kampf*. They were required to sever any connection that they might have had with liberal movements and to take an oath that this had been done. All teachers who were opposed to the new regime or who were suspected of secretly working against it were summarily dismissed; nor did any of them dare to make a public protest against this high-handed action. All teachers' associations, one hundred and sixty of them, some of which had stood for liberal principles since 1848, were disbanded; and all their previous members, who were continued in service, were combined into a single National Socialist Teachers' Association. In the new High Schools for the Preparation of Teachers, the students were required to wear the brown uniforms and to pursue studies in National Socialist sociology, military geography, and frontier problems.

Many of the teachers' schools were moved into the country and a chain of such "fortresses, invisible to the physical eye" were set up in eastern Prussia, to "form a ring for the spiritual and cultural protection of the threatened East." Candidates for teacher training were required to prove their Aryan origin and to present evidence of activity in militant political organizations. Teachers in actual service in the schools were organized on the leadership principle, the former teachers' councils through which the rank and file had participated in the management were disbanded or shorn of their power, and the principal of each school was made solely responsible to the state authorities for the administration.

A parallel step was the subordination of the youth societies to National Socialism. Although considerable difficulty was experienced in bringing the religious and especially the Catholic youth organizations into line, through promises, which were often not kept, threats, ridicule, and actual violence, the Hitler Youth were made supreme. In the disillusionment and insecurity of the postwar era when businessmen, the middle classes, labor, the peasants, and indeed all groups were looking for a savior, the youth was perhaps the most easily exploited. But the propaganda was diabolically clever. By appeals to youthful idealism and ambition, to the desire to belong and to wear a uniform, by songs, drills, and secret rites, by promising everything to everybody, the National Socialists drew them all into their net. National Socialism was from the beginning to a great degree a youth movement, on the principle that whoever captures the youth controls the future. And herein there is a warning for all democracies.

Like the teachers, the youth were organized into one corporate body of boys from ten to fourteen, boys from fourteen to eighteen, and two groups of girls with the same age limits. By grouping them all together we may, with some license, call these the Hitler Youth, a term which is strictly applicable only to the older boys. The Hitler Youth were led to profess aims which are exactly opposite to those of the prewar Youth Societies, namely, rigid military discipline, subordination to the will of the leader, ultimately Hitler himself, physical training as a basis for military training, and race prejudices. They were organized into squads, companies, regiments, and battalions, like an army, and their activities included marching, digging trenches, bayonet drill, the throwing of imitation hand grenades, and defense against gas and bombing attacks. The girls also carried on work in first aid, child care, nutrition, and camp cooking. Little of youthfulness and freedom was left to the Hitler Youth. They were driven after school, in Hitler's words, to steel their young bodies and to develop the spirit of aggression against the day of need when they should be called upon to sacrifice their lives for an all-conquering Germany. Little time was left for home, church, recreation, and personal interests. For the

intense mental work of the old gymnasium, which sometimes drove boys to suicide, there was substituted a still more intense physical and military program. Just this intensity seems to be one of the most unamiable of German traits, but then National Socialism sees no virtue in amiability. We use the present tense for it should be emphasized that, although Germany has been defeated, National Socialism in Germany and elsewhere is not dead.

In addition to the complete change in the spirit and aims of the schools, some changes were made in the curricula also. It may seem to be a small matter that the common schools were required to teach the old German script instead of the Roman hand which had come into wide use; but this only shows that every means was to be used to remind the people of old German custom and tradition. The "biology" or "science" of race and racial purity was introduced and attention was given to eugenics. The physical education was militarized and was indeed defined by the Minister of Education as premilitary training. In fact the whole school system was militarized. Language and history teaching were "reformed" to glorify German achievements and German heroes. History was throughout changed into an instrument of political indoctrination. In the common schools and especially in the secondary schools the racial, national, political, and military values were stressed. Even in the universities the ideal of the politician-soldier type was made to displace the former scholar type. Teachers in the secondary schools and university professors became reserve officers, and extraordinary emphasis was laid upon the political and military activities of both teachers and pupils.

Germany has been defeated and the attempt to re-educate her population is just beginning.

6. IN CONCLUSION

We should return from our excursion into history with a broader and deeper understanding of education and schools. Great achievements, and we think progress, have resulted from the endeavors of our predecessors; but until the spirit of man declines and hope dies, every stage of his adventure will be merely a foundation for further endeavor. Every generation borrows from the past, both at home and abroad, and also creates new institutions or applies old ones to new uses. We should try to learn from history to borrow discriminatingly from the past and present; and those who have the gift of invention or discovery should learn to create with clearer intelligence. The education of the past has handed to the present many problems for solution. The historically minded teacher will attack them in no narrow spirit but rather with the vision provided by an experience far

wider and more extended than his own view, even wider and more extended than that of any one people or epoch. This is as it should be. This is no time for provincial views.

"Above all nations," said Goldwin Smith, and the sentence is carved in stone in front of Goldwin Smith Hall on the Cornell University campus, "Above all nations is humanity." We have seen how man in the dim past began to discover the truths of nature and human nature and to develop institutions to preserve and to promote such truth. In favored regions and among fortunate peoples human life has become humane, intelligent, tolerant, civilized, and sometimes wise. It is the function of the school along with other institutions to cultivate and spread civilization and wisdom, first at home and then abroad. To these tasks teachers dedicate themselves when they become teachers; but before they can spread understanding, civilization, and wisdom they must first themselves possess them. The world today is not perishing for lack of discoverers, it has a fair share of able administrators, but it needs most of all effective teachers.

INDEX

- AACHEN, 73; Council of, 75
 Abbotsholme, 336, 487
 Abdard, 88, 102, 117
 Academies, French, 92, 170; German knightly, 92, 170, English, 170; American, 367, 403, Franklin's, 389; influence and defects of American, 390; becoming high schools, 501
 Academy, Plato's, 32, 39
 Academy of Sciences, French, 177
 Accademia dei Lincei, 177
 Accademia del Cimento, 177
 Accrediting plans, high school, 510
 Adams, John, president, 403
 Adams, John Quincy, 427
 Addison, Joseph, 347
 Adelhard of Bath, 87, 88
 Adler, Felix, 287, 473; and Ethical Culture Schools, 485
 Adult education, 547 ff
 Ælfrie, 345
 Aenens Sylvius, 128
 Aesop, 26, 71
 Agassiz, Louis, 428, 465; summer school at Penikese, 448, 467; as teacher, 464
 Agnola, Rudolph, 135, 149
 Aims of education, Hebrew, 14, Greek, 15, 18; Spartan, 20 f.; Athenian, 23 f., 27 ff.; Plato's, 35, Alexandrian, 38 f.; early Roman, 44 f., later Roman, 48; Quintilian's, 54 f.; early Christian, 61 f.; monastic, 72; chivalric, 91; in medieval cities, 99 ff.; of medieval universities, 106; in Italian Renaissance, 114, 119 f., 126, 131; Luther's, 155 ff.; Jesuit, 162; of Comenius, 192 ff.; philanthropist, 202, 230 f.; Rousseau's, 208, 213; Condorcet's, 219 f.; of benevolent despots, 225; Pestalozzi's, 234, 244 f.; Herbart's, 256; Froebel's, 276, 278 ff., Napoleon's, 297 f.; in France, 312 ff.; in German Republic, 332, 335; National Socialist, 557 f.; English, 347; American, 373, 398, 402 ff., 415, 417, 467 f., Felix Adler's, 473 f., 485; F. W. Parker's, 477; Progressive, 485 ff., 491; high school, 519, 527; Soviet, 552
 à Kempis, Thomas, 149
 Akkad, 8; language of, 11
 Akron (Ohio) law, 498
 Alarie, 54
 Alberti, Leon Battista, 117, 128, 133
 Albert the Great, 89
 Albigenes, 143
 Alchemy, 87
 Alcibiades, 30
 Alcott, Amos Bronson, 484
 Alcum, 69, 74 f.
 Aldhelm, 345
 Aldus, printer, 125; his press, 145
 Alexander the Great, 36
 Alexandria, 37, 59 ff., 84, 92; catechetical school in, 63
 Alfred the Great, 76, 345 f.
 al-Khwarizmi, 85 ff.
 Almagest, 88
 al-Razes, 86
 Alsted, J. H., 189
 American Adult Education Association, 548 f.
 American Education Fellowship, 490
 American Institute of Instruction, 418
 American Lyceum, 418 f., 548
 Americanization of Pennsylvania Germans, 337, 382 f.
 Andrae, John V., 170, 173; on education of small children, 269
 Angell, James R., 507
 Antioch College, 407
 Aperti, Ferrante, 272
 Apperception, 254 ff.
 Apprenticeship, 7 f., 96 ff., 157, indenture, 97; laws on, 161, 346; in American colonies, 369, 374-376
 Aquinas, Thomas, 89, 115
 Arabic language, 84, 86 ff.
 Aramaic language, 13
 Archaeology, 5, 7, 10; classical, 116
 Archimedes, 37, 179
 Anstarchus, 37
 Aristotle, 22, 66, 71, 113, 120, 250, 253; educational theory, 36; his Lyceum, 39; his logical works, 88; recovery of his works, 88; intellectual crisis caused by, 89
 Arithmetic, in Greek schools, 26 f.; Roman, 47; Hindu-Arabic notation, 87, 95; Pestalozzian mental and primary, 243 f., 463; also mentioned, 58, 64, 97, 99, 145, 186, 373, 409
 Arndt, Ernst Moritz, 321

- Arnold, Matthew, 30, 309; as school inspector, 354
 Ashurbanipal, 10 f., 14
 Asceticism, 66 ff., 90
 Association psychology, 173, 250 ff.; laws of, 251 f., secondary laws of, 252 f.
 Athens, 22 ff., 28 ff., 32 f., 37 f.
 Athletics, 20 f., 28, 30, 36
Aufbauschule, 333, 336
 Augustine, Saint, 59, 64, 120, 165, 253
 Aurispa, 122
 Averroes, 86 ff.
 Avicenna, 86
 Avignon, 119, 141
- BAGHE, ALEXANDER, 319, 321, 337; president Philadelphia Central High School, 501
 Bacon, Francis, 170, 181, 418, 463; inductive method, 178
 Badley, J. H., 360
 Bagdad, 84 f.
 Bailey, Ebenezer, 426, 500
 Bailey, Liberty H., 469
 Bain, Alexander, 253
 Baldwin, Bird T., 476
 Baldwin, Joseph, 447
 Balliol College, 134
 Bancroft, George, and the Round Hill School, 337
 Bangor, Irish monastery, 68
 Barraud, Henry, 246, 384, 422, 425, 505; infant school promoter, 271; educational editor, 352, 418; on grading of schools, 497; organizer, normal institute, 448; on object-teaching, 464, 466 f.; kindergarten notice, 471; notice of Herbart, 483; chief Connecticut school officer, 471 f.; first United States Commissioner of Education, 444
 Barnard, Frederick A. P., 513
 Barzizza, G., 130
 Basedow, J. B., 92, 197, 225 f., 227 ff.; 241, 320; general views, 227; early life, 227; his *Memorial*, 227 f.; his philanthropium, 228 f.
 Bates Case, 346
 Bateus, William, 190
 Batsch, A. J., and Froebel, 273
 Battersea Training College, 246, 352
 Bavaria, 60; reform of elementary schools, 322
 Beccaria, Antonio, 134
 Beck, Charles, 337
 Bede, the Venerable, 68, 87, 345
 Beccher, Catherine Esther, 440
 Bell, Dr. Andrew, 348 ff., 355, religious character of his schools, 350
 Bembo, 117
 Benedictine Rule, 66 f.
 Benedict, Saint, 66, 71
 Benevolent despots, 225
 Beren College, 407
 Berlin, University, 230, 321
 Bessanon, 121, 124
 Beza, Theodore, 159
 Bible, 8, 139, 142 ff., 146 ff., 187, 348, 373; vernacular versions, 151, use in schools, 346
 Birkbeck, George, 548
 Bismarck, 318, 326 f.; and the Kulturkampf, 327; and the socialists, 328
 Blair Bill, 437
 Blow, Susan, quoted, 280
 Board of Education, English national, 356
 Bobbio, monastery, 68
 Boccaccio, 120
 Boelte, Mana, 471 f.
 Boethius, 64, 76, 88
 Boniface VIII, Pope, 140 f.
 Boniface, Saint, 60
 Bonser, Frederick G., 508
 Bookkeeping, development of, 95; subject, 99 ff., 226, 373, in American colonial schools, 389, 409
 Borough Road Training College, opened by Lancaster, 351, government-aided, 354
 Boston high school movement, 412, 499 f.
 Boston Latin School, 381, 386, 409, 411, 497, 499
 Boston schools, history of, 409-413, double-headed system, 409; in the Revolution, 410 f., primary schools, 411; English Classical School, 412, 499, 514
 Boyle, Robert, 180, 183
 Bray, Thomas, 348
 Breasted, James H., 6 f., 9 f., 338
 Brethren of the Common Life, 135, 139, 147, 149
 Buggs, Thomas H., 514; chairman, Committee on Orientation of Secondary Education, 522 f.
 Brinsley, John, 188, use of monitors, 348
 British and Foreign School Society, 351, 354
 Brothers of the Christian Schools, 165, 297 f.; preparation of teachers by, 445
 Brougham Committee, on condition of the poor of London, 349, 354
 Brougham, Henry, 319, infant school promotion, 352; chairman investigating committee, 353 ff.; education bill, 354
 Brown, Thomas, 252
 Brown University, 391 f.
 Bruni, Leonardo, 121, 128
 Buddé, William, 135
 Bugenhagen, John, 157
 Burk, Frederic, 481
Burschenschaft, association of students, 323
 Burton, Warren, 464
 Business colleges, 408
 Butler, Nicholas Murray, 515
 Butler, Richard A., 357
 Byzantine Empire, 39, 54, 84, 95

- CAESAR, 52 f., 133
 Calendar, Egyptian, 7; Roman, 52
 Calvin, John, 158; education, and educational activity, 159
 Cambridge University, 105, 175 f., 340
 Campanella, Thomas, 170; educational doctrines, 173
 Campe, J. H., 229, 320
 Capella, Martianus, 64, 87
 Carnegie Foundation for the Advancement of Teaching, 513
 Cassian, John, 66
 Castellion, 159
 Castiglione, Baldassare, 92, 133
 Cassiodorus, 65 ff.
 Catechetical Schools, 62 f.
 Catechism, 230, 346 f., 376
 Catechumenal schools, 62 f.
 Cathedral schools, 59, 73, 92, 100 ff.
 Cato's *Distichs*, 71, 150
 Cato the Elder, 47
 Cattell, J. McKeen, 340
 Caxton, William, 70, 145
 Cellini, Benvenuto, 117
 Celtes, Conrad, 147
 Centralized administration of schools, in France, 297, 306 f.; in Prussia, 319; proposed in United States, 404
 Central schools, England, 359
 Chalcondylas, D., 121
 Character education, 12, 21, 27, 126, 130; Socratic, 33; Roman, 44 f.; monastic, 72 f.; chivalric, 91; in Locke, 185 f.; in Comenius, 192 f.; by the Jesuits, 161, 163; Rousseau on, 213, 217; Pestalozzi's efforts in, at Neuhof, 234, at Stanz, 237, at Yverdon, 243 f.; theory of Herbart on, 256 ff., 263 f.; in France, 313; in German youth-movement, 335; as high school ideal, 519, 522; as aim of National Honor Society, 522; and juvenile delinquency, 546 f.; by the Nazis, 557 ff.
 Charity schools, 347, 376, 380
 Charlemagne, 73, 80, 95, 292; his educational policy, 75 f.
 Chaucer, 64, 92, 142, 152
 Cheever, Ezekiel, 409
 Child labor, 353, 356, 416
 Children's books, 229 f., 465
 Child study, 283; in Europe, 475 f.; in United States, 475 f.
 Chivalric education, 91
 Chodowiecki, 228
 Christianity, beliefs, 59 f.; and philosophy, 61 ff.; liberal tendencies, 147; and Platonism, 152; early practices, 153
 Chrysoloras, Manuel, 121 f., 125, 130
 Cicero, 37, 54 f., 120 f.; style and initiation in school, 115, 118, 133; outline for orations, 259
 City-states, Greek, 19; Italian, 112
 Civilian Conservation Corps, 548
 Civilization, early, 3 ff.
 Classics, 120 ff.; recovery of, 112 ff., 120 ff.; basis of Renaissance humanism, 114; libraries of, 122 f.; printing of, 124 f.; chief authors used in schools, 128 f., 133 f.
 Clement of Alexandria, 63
 Clinton, DeWitt, 415
 Cluny, 89
 Colburn, Warren, 429
 Colet, John, 139, 151, 345 f.
 Collège de France, 135
 Collège de Guyenne, 135
 College Entrance Board, 513 ff.
 Collège de Louis le Grand, 296
 College of Philadelphia, 391
 Collegiate School of the Dutch Reformed Church, 381
 Colonial conditions in America, 367-372
 Columba, Saint, 60
 Columbanus, 68
 Columbia University, 391 ff.; efforts to bring under state control, 440, Teachers College, 448; and manual education, 474
 Comenius, John Amos, 89, 170, 181, 187-197, 220, 250, 260, 268, 285, 323, 463; as author, 189 f.; textbooks, 190 ff.; theory of education, 192 ff.; quoted, 194; on school organization, 195
 Commercial education, 99 ff.
 Commission on Relation of School and College, 523 f.
 Commission on Reorganization of Secondary Education, 518 f.
 Committee of Ten, 510 ff., 514
 Committee on the Orientation of Secondary Education, 522 f.
Compagnons de l'Université Nouvelle, Les, 308, 311
 Compulsory school attendance, 14, 405; urged by Luther, 157; in Denmark, 158; in German states, 227, 318; in England, 356 f.; in continuation schools, 358; Massachusetts law, 450 f.; United States, 450 ff.
 Computus, 72, 75
 Comstock, Anna B., 469 f.
 Conciliar party, 143 f.
 Condillac, 203
 Condorcet, 219-221, 295, 308, 404, 519
 Conference for Education in the South, 438
 Constitution of the German Republic, education in, 332 f.
 Constitution of the United States, 398, lacking education clauses, 402, 419
 Cooperative education, 407
 Cooperative Study of Secondary School Standards, 526
 Copernicus, Nicholas, 149, 177, 180; his method, 179, 259
 Coram, Robert, 403

- Cordier, Mathurin (Corderius), 135, 159; his *Colloquies*, 150
 Correspondence schools, 548
 Corvei, 70
 Council of Arles, 344
 Council of Constance, 143 f.
 Counter-Reformation, 113, 172
 Country Day Schools, 488 f.
 Cousin, Victor, 246, 310, 337; Report on German schools and English translation, 299
 Cowper-Temple Clause, 357
 Cox Case, 346
 Crates of Mallos, 46
 Croyland, 70
 Crusades, 89 f.; 154, 294
 Culture epochs, 210, 263, 285 f.; 484
 Curriculum, 38, 58 f., 75, 99, 155, 164 f., 180, 353, in catechetical schools, 63; in Roman schools, 47; monastic, 70 f., chivalric, 91; Renaissance, 126 ff., 131 f.; elementary at Reformation, 157, Jesuit, 162 f.; Jansenist, 164 f.; realist, 171, 176 f.; Sulzer's, 202 f.; in *Émile*, 213 f.; philanthropist, 226, 228; Herbart's, 261 f.; of secondary schools under Napoleon, 276; in France (1833), 299, (1938), 306, (1931), 310; in German Middle Schools, 330, and secondary schools, 331; English elementary, 358, secondary, 360 f.; and S. P. G. charity schools, 380; in American Latin Schools, 386 f.; in American academies, 390; in high schools, 499 ff., 503-510, 520 f., also, 484, 497, 510 f.; 515
 Curry, J. L. M., 437
 DANIEL OF MORLEY, 88
 Dante, 113, 141
 Dartmouth College, 340; case in Supreme Court, 440
 Darwin, Charles, 37, 253, 283, 354
 Davis, Jesse B., 517
 Debatable issues, teaching of, 537 f.
 DeGarmo, Charles, 265; publications, 483
 Democracy, 10, 30; and nationalism, 295; early, in New England, 370; in American education, 534 ff.; problems of, 539 f.
 Demosthenes, 31, 48
 Denman, J. S., organizer of teachers' institutes, 448
 Denmark, 157 f.; folk high schools of, 548
 Department of Science and Art, 361
 DeQuincey, Thomas, 113
 Descartes, 170, 180, 308; on scientific method, 178; on distribution of ability, 181
 Deutsche Oberschule, 333, 336
 Deventer, 135, 148
 Dewey, John, 259, 484, 490, 507; books by, 484, 486 f.; his University Elementary School, 485 f.; quoted, 486; theory of, 486 ff., 524
 Dexter, Edwin Grant, 511
 Dickinson, John W., 464 f.
 Dictamen, 71, 100
 Dictata, 26
 Diesterweg, F. A. W., supporter of Froebel, 283, teachers' seminary director, 323; writings banned, 325
 Discipline, in Sparta, 20 f.; by Athenian pedagogue, 25; in monastic schools, 70; in medieval universities, 103 f., 105 f.; at the Renaissance, 131; view of Luther, 157; in Jesuit schools, 163; view of Rousseau, 213; Herbart's doctrine of, 256 f.; Lancasterian, 350; in district school, 424 f.
 District system, 385, 388; defects of, 385 f., 423 f.
 Doddridge, Philip, 176
 Dominicans, 102, 152
 Domitian, 55, 126
 Donatus, Aelius, grammarian, 64
 Douglas Commission, on vocational education, 508
 Drawing, 36, 133, 177, 188, 205, 214 f., 226; in American schools, 505
 Drobisch, Martin, 265
 Dupont de Nemours, Pierre, 403 f.
 Dury, John, 174
 EATON, AMOS, 407, 539
 Ebers, Georg, 281
 Eckart, 147
 École des Roches, 487
 Edgeworth, Maria, 246, 269
 Educational magazines, 417 f.
 Educational methods, 33, 63, 80, 130; Vittorino's, 121 f., 145; Jesuit, 163 f.; realist, 174 ff.; effect of science on, 180 f.; in language teaching, 187 f., 308 f.; Rousseau's, 212 f.; Pestalozzian, 239-245, 352 f., also, 334, 353
 Educational theory, 32, 38, 54, 125-129, 133; see Comenius, Locke, Rousseau, Pestalozzi, Herbart, Froebel, Dewey
 Education, definition of, 2
 Edwards, Richard, 447
 Eggleston, Edward, 425
 Eliot, Charles William, 498, 511 f.; chairman Committee of Ten, 510
 Elyot, Sir Thomas, 92
 Emerson, George B., 426, 499
 Emerson, R. W., 418
 Encyclopedism, 38, 193
 Encyclopedists, 201
 Engels, Frederick, 324
 Engineering, 42, French schools of, 297; early American schools of, 407
 England, 60, 97, 100, 140 f.; Reformation in, 160 f.; infant schools of, 271; early

- schools of, 344 f.; Public Schools, 345, 360; educational program of Puritans, 346, charity schools, 347 f.; monitonal systems, 348-351, influences from the continent, 351 f.; state activity, 353-356; great educational commissions, 355 f.; secondary schools, 359 ff.
- English academies, 175-177
- English Poor and Apprenticeship Laws, 161
- Erasistratus, 36
- Erasmus, 64, 121, 139 f., 145 ff.
- Eratosthenes, 38
- Ernst, Otto, 329
- Ethical Culture Schools, 485
- Ethics, 12, 18, 32 f., 38 f.; Greek and Christian, 113, 129; also, 186
- Eton College, 345
- Etruscans, 42 f.
- Euclid, 36 f., 87, 130
- Eusebius, 63
- Everett, Edward, 415, 427
- Extracurricular activities, 520 f.
- FACULTY PSYCHOLOGY**, 253
- Federal aid to education, 439, 443 f.
- Federigo, Duke of Urbino, 124
- Felbiger, J. I. von, 319
- Fellenberg, Emanuel, 226, 237 f., 246, 418; influence, 352; system in America, 406 f.
- Fénelon, 165
- Ferrara, 129, 149; Council of, 122
- Ferry, Jules, 304, 309
- Feudalism, 91
- Fichte, J. G., 245; *Addresses to the German Nation*, 320
- Filelfo, 118, 122, 130
- Fischer, Karl, youth leader, 335
- Fisher Act (1918), 356 f.
- Fithian, Philip Vickers, 377
- Fleury, Abbé Claude, 183, 308
- Florence, 94 f., 112, 118, 124, 177
- Flower, Enoch, 381
- Follen, Charles, 337
- Formal discipline, 31, 511 f.
- Forster Act, 351, 356 f.
- France, 18, 60, 90, 103, 135, 140 f., 292-315; teaching of nationalism in, 312 ff.
- Franciscans, 102
- Francis of Assisi, Saint, 115
- Francke, August Hermann, 177, 347, 382
- Franco-Prussian War, 303, 325
- Frankenberg, Caroline, 471
- Franklin, Benjamin, 184, 399, 402; proposals for academy, 391
- Frederick the Great, 318 f., 327
- Free School Society of New York, 404 ff
- French Revolution, 207, 295; educational programs in, 296; influence, 321
- Friends, religious society, 349; settlements in America, 371 ff.; educational activity, 380 f.; opposition to slavery, 414
- Froebel, F. A. W., 195, 245, 250, 268 f., 272-286, education through creative activity, or *Darstellung*, 278; forming the kindergarten, 279 ff., organicism, 273 f.; play in education, 284 f.; psychology, 283 f.; influence upon infant school, 352; also, 321, 323, 455, 462, 473
- Froebel, Karl, 281
- Froben, J., printer, 125, 145, 151, 154
- Frontier, in America, influence on education, 385, 399 f.; and travel, 399
- Fulda, 60, 68
- GALEN, 85, 88
- Gahleo, 177, 179 f.
- Gallaudet, Thomas Hopkins, 446
- Gardiner Lyccum, 407
- Garrison, William Lloyd, 414
- Gaudig, Hugo, 336
- Gaza, Theodore, 121, 149
- Gedike, Fredrick, 319
- Geneva, 145, 158, sumptuary laws of, 159; schools, 159 f.; birthplace, Rousseau, 205
- Geographical discoveries, 113
- Geography, 31 f., 177, 214 f., Pestalozzian teaching of, 241 f.
- George-Deen Act, 518
- George Junior Republic, 487
- George Peabody College for Teachers, 438
- Gerard of Cremona, 88
- Germany, 145 ff., 179, 318-341; reforms in Napoleonic era, 320 f.; common schools in, 322 f.; political reaction in, 322 f., 327; teaching as a profession, 329 f.; secondary schools, 330 f., 336, Weimar Constitution, 332, youth movement, 335; educational writing, 334; influence, 337 ff.
- Germany under National Socialism, 557-560
- Gesell, Arnold, 476
- Gilbert, Wilham, 178, 180
- Gilds, 96 f., 112, 173, their schools, 97
- Girard, Gregoire, 226, 352
- Girls, education of, 446; in Sparta, 21 f.; in Athens, 28; at the Renaissance, 128; in the *Émile*, 218; by Moravians, 382; in private schools, 446; Boston High and Normal School, 500
- Glasgow University, 176
- Goethe, 274, 320, 329
- Gott, Samuel, 173, 269
- Göttingen University, 251, 273, 275, 324
- Gouge, Thomas, 347
- Grading of schools, 429 f., 454 f., 497 f.
- Great Schism, 141 f., 144
- Greaves, J. P., 238
- Grammar, developed by Sophists, 30 f.; in course of study, 38, 71; medieval textbooks in, 64
- Grammar schools, 134; reformed, in England, 345, American, 386

- Gregory I, Pope, 60, 76
 Grimm, Hermann, and Jacob, 324
 Groscom, John, 246, 411
 Groos, Karl, 285
 Groot, Gerhard, 147
 Grundschole, 332, 336
 Grundtvig, N. F. S., 548
 Guarino, Battista, 128 ff.
 Guarino da Verona, 121 f., 129 ff.
 Guizot, F. P. G., 300, 450
 Gutenberg, 145
 Guyot, Arnold, 428
 Gymnasiums, as classical school, 134, 158;
 Prussian reformed, 322, 331, 333; im-
 ported into United States, 337
- HADOW REPORTS, 357
 Hailmann, William N., 472 f., 483
 Hall, G. Stanley, 285, 340, promoter of child
 study, 475
 Hall, S. R., 417; early school for teachers, 446;
 also, 462
 Halle University, 228 f.
 Hamburg, school dispute in, 99 ff.
 Hammurabi, Code of, 7, 9 f.
 Handwork in elementary schools, 473 ff.
 Handwriting, teaching of, 373
 Hanseatic League, 95
 Hanus, Paul N., 517
 Harnisch, William, 322
 Harper, William Ramsey, 516
 Harrington, James, 173
 Harris, William T., 429, 480
 Harrower, John, 377
 Harrow School, 345
 Hartenstein, Gustav, 265
 Hartley, David, 252
 Hartlib, Samuel, 174
 Harvard University, 340, 391 ff., 422
 Harvey, William, 178 ff.
 Haskins, Charles Homer, 111
 Hawley, Gideon, 420, 427
 Hawthorne, Nathaniel, 409
 Hebrew studies, 139, 152 f.
 Hecker, Julius, 177
 Hegel, 251, 265, 274, 320
 Hegius, Alexander, 135, 148
 Heidelberg University, 148, 150, 189
 Hellenistic Age, 36, 38 f., 52
 Hellenizing, of Jews, 61; of Romans, 47; of
 Moselems, 82 ff.
 Helots, 19
 Helvetius, 203
 Herbart, J. F., 241, 245, 250-265, 268, 336,
 462; aim of education, 255 f.; appercep-
 tion doctrine, 254 f., 258; curriculum
 theories, 261 ff.; doctrine of interest,
 257 f., 261; formal steps, 258 ff.; meth-
 ods, 259 f., 262 f.; influence, 264 f.
 Herbartianism in the United States, 483 f.,
 512
- Herder, J. G., 229
 Herodotus, 22, 31, 262
 Heusinger, J. G. H., 278
 Hieronymians, 135, 139, 147, 149
 Higher education, 32, 297, 391 ff., 403; land-
 grant colleges, 439-443; Dartmouth Col-
 lege Case, 440, state university origins,
 440 f.; professional education of teach-
 ers, 448 f.
 High school, American public, definitions of,
 496 f.; relation to academy, 391, early
 high schools, 497-501, evolution from
 graded school, 497 f., selective nature of,
 500; opposition to, 502; accrediting of,
 510; increasing attendance, 520; recent
 trends, 525 ff.
 Hill, Thomas Wright, 360
 Hindu numerals, 87, 95
 Hinsdale, Burke A., 512
 Hippocrates, 32, 180
 History, 7, 31, 48; St. Augustine's theory of,
 64; Rousseau on, 218; also, 114, 133,
 171, 177, 186, 214, 226
 History of education, 3, 329, 334, 350; les-
 sons from, 533 ff.
 Hitler, A., 294, 327, 557
 Hitler Youth, 335, 559
 Hittites, 11
 Hoar Bill, 436 f.
 Hobbes, Thomas, 211
 Holbrook, Josiah, 419
 Holman, Henry, quoted, 350
 Home and Colonial School Society, 446; or-
 ganization of, 352; and Pestalozzi, 246,
 and infant schools, 271
 Home economics, 509
 Homer, and the Homeric poems, 20 f., 29, 32,
 34, 37, 44, 120, 133
 Hooker, Thomas, 370
 Hoole, Charles, 188, 191
 Hopkins Grammar School, 388
 Hosea, 13
 Huddleston, Mr., 380
 Humanism, classical, 113 f.; decline of, 132 f.;
 northern phase, 139 f.; 149 ff., at Geneva,
 159
 Humboldt, Alexander, 229
 Humboldt, William, 229, 331; Minister of
 Education, 321 f.
 Hume, David, 207
 Humphrey, Duke, 134
 Hunayn-ibn-Ishaq, 85
 Huntington, Emily, 485
 Huss, John, 143 f., 158, 372
 Hutcheson, Francis, 176
 Hutchinson, Ann, 370
 Huyghens, Christian, 179
 Hygiene, 90
- ibn-Rusd (Averroes), 86 f., 89
 ibn-Sina (Avicenna), 86

Illinois Association of School Boards, 550
 Illiteracy, 12, 373, 416, 438; present conditions, 542 ff.
 Indiana University, 510
 Individual instruction, 480 ff.
 Individualism in education, of Hellenistic Age, 36 ff., of chivalry, 91 f.; Abelard's method, 102, in the Renaissance, 117, 129; in the theories of Locke, 184 f., and Rousseau, 204; of radical reformers in German Republic, 336; opposing public education, 353, 400; as mode of teaching, 481; in relation to democracy, 536 f., 540
 Indulgences, 154
 Industrial arts education, 216 f., 226; developed by Heusinger and Froebel, 278; in American schools, 505 ff., 508, purposes of, 507
 Industrial Revolution, 298
 Infant school, 268, 268-272, 357; Henry Barnard's interest in, 271, criticism of, 271 f., in France, 300; British, 351 f.
 Inquisition, 143
 International Kindergarten Union, 282
 Ireland, 60, 68
 Ireland, Bishop John, 357
 Imerius, 102
 Isidore of Seville, 65, 87
 Ismar, F. A., 406
 Isocrates, 31
 Italy, 18, 31, 42 f., 60, 111 ff., 135, 149; as seat of the Renaissance, 115 f.
 JACKMAN, WILBUR S., 469, 474
 Jackson, Andrew, 400, 413
 Jahn, F. L., 273, 276, 321 f., 324, 337
 James of Venice, 88
 James, William, 484, 512
 Jefferson, Thomas, 19, 208, 413; his education bill of 1779, 403
 Jena University, 176, 251, 265, 273; and nationalist student movement, 323
 Jerome of Prague, 143
 Jerome, Saint, 59, 64, 120
 Jesuit Society and schools, 139, 159, 165, 170 f., 218, 327, 445; history of, 161-164; constitution and government, 161 f.; spread and success of schools, 162; use of monitors, 348
 Johnson, Andrew, 436
 Johnson, Manetta, 488
 Jones, Margaret E. M., 466
 Josephus, 14
 Joshua ben Gamala, 14
 Judaism, 14
 Julian, "The Apostate," 62
 Jundi-Shapur, 84 f.
 Junior college, 515 f.
 Junior high school, 514 f.

Justin, Martyr, 61
 Juvenile delinquency, 546 f.
 KALAMAZOO DECISION, 448, 501 f.
 Kandel, Isaac Leon, 361
 Kant, Immanuel, 228, 251, 286, 322
 Kay-Shuttleworth, James, 352, 354 f.
 Keilhau, 276 f.
 Kennet, Dr. White, 347
 Kerschensteiner, Georg, 328 ff., 336
 Kindergarten, 268; promoters of, 281 ff.; in United States, 470-473; public, 472 f.; problems of, 472 f., John Dewey's definition of, 486
 Knox, Samuel, 403 f.
 Knox College, 406
 Koran, 88
 Kraus, Dr. John, 471 f.
 Krause, K. C. F., 273 f.
 Kriege, Matilda, and Alma, 471
 Krüsi, Hermann, junior, 352 f., 468, 479
 Krusi, Hermann, senior, 237, 245
 Kulturkampf, 327
 LABOR UNIONS AND EDUCATION, 416 f.
 La Chalotais, 218 f., 308
 Lakanal, law of, 296
 Lancaster, Joseph, 348, 418, 445; early teaching, 349, ingenuity of, 349; writings, 350; American visit, 351
 Land-grant colleges, 439-443, for Negroes, 442; problems of, 442 f.
 Land grants for schools, 401 f.
 Langenthal, Henry, 276 ff., 279
 Language studies, 37, 187-189, 194 f., 329, 387, 544; Rousseau's opposition to, 214; modern versus ancient, 309
 Larsson, Gustaf, 474
 LaSalle, Jean Baptiste, 165
 Lassalle, Ferdinand, 327
 Latin language, at the Renaissance, 114 f., authors read, 133; declining use in teaching, 176; in the seventeenth century, 187 ff.
 Latin Grammar Schools, American, 369; nature of, 386; laws pertaining to, 388
 Lazarus, Moritz, 285, 475
 Leach, Arthur F., 97
 Leeuwenhoek, Antonius van, 179
 Lefèvre d'Étaples, Jacques, 151
Lehrfreiheit, in German universities, 324
 Leibnitz, W. von, 180, 253 f.
 Leipzig University, 148, 227, 265
 Leo X, Pope, 153
 Leo XIII, Pope, 327
 Leonardo da Vinci, 117
 Leonardo Fibonacci, 87
 Leontius Pilatus, 120
 Lapeleier de Saint-Fargeau, Louis-Michel, 296
 Lessing, G. E., 210
 Libanius, 84

- Libranes, 37, 53, 65, monastic, 69 ff.; classical, 122 ff.
 Library of Congress, 444
 Lietz, Hermann, 336
 Lincoln, Abraham, 439
 Lindisfarne, 60
 Lindner, G. A., 265
 Literacy, growth of, 99 f., 146, 154 ff., 533 f., 542 f.
 Litt, Theodore, 336
 Livius Andronicus, 46
 Locke, John, 22, 92, 170, 180, 181-187, 203 f., 211 f., 241, 250, 268, 295, 370, 418, 463, 514; writings, 182 f.; and the Abbé Fleury, 183, his educational theory, 184 f.
 Lollards, 142, 146, 345
 London Infant School Society, 352
 Lorain, P., 300
 Louvain, 149, 187
 Love, Samuel G., 474
 Loyola, Saint Ignatius, 159, 161
 Lucretius, 51, 120
 Luder, Peter, 149
 Ludus, 45, 49
 Luther, Martin, 145, 149, 383; translator of Bible, 151; Ninety-five Theses, 154, on education, 156 f.
 Lutheran movement, 153-158
 Lutherans, 381 f.
 Lyceum, of Aristotle, 39

 MACHIAVELLI, 117 f
 Macmillan, Rachel, and Margaret, 287 f.
 McMurtry, Frank, 488
 Madison, James, 19, 387, 403
 Magna Charta, 294
 Magyars, 81
 Maimon, Moses ben, 89
 Malaise of school-youth, 334 f.
 Malpighi, Marcello, 180
 Mandeville, B., 347
 Mann, Horace, 246, 319, 337, 415, 424 ff.; 463 ff., 505; characteristics, 427; on Germany, 325; work and achievement, 426 ff., Secretary of Massachusetts Board of Education, 426
 Mann, Mrs. Horace, 281
 Mantua, 130 f.
 Manual labor education, 406 f.
 Manual training, 216 f., 226, 278, 505; in public schools, 506 ff.
 Marcus Aurelius, 43
 Marchholtz-Bulow, Bertha von, 281 f.
 Martin, Saint, of Tours, 66, 74
 Marwedel, Emma, 471
 Marx, Karl, 327
 Massachusetts Institute of Technology, 500
 Mathematics, 30, 32, 37, 48, 87; branches taught in colonial schools, 389
 Mather, Sir William, 287
 Maxwell, William N., 429
 Mayo, Charles, 246, 352
 Mayo, Elizabeth, 352
 Medici, Lorenzo, 121; Cosimo de', 123, 124
 Melancthon, P., 158
 Mennonites, 371, 382; opposition to slavery, 414
 Merchant Taylors School, 97, 188
 Menam, Junus L., 488
 Merrill, George A., 517
 Methodists, 382
 Middendorf, William, 276 f.
 Mill, James, 252 f.
 Milton, John, 174 f.
 Missionary colleges, American, 414
 Mohammed, 83
 Mohammedans, 80 f., 86, 294; sources of their learning, 82 f., literary interests, 112
 Monasticism, 66 ff.
 Monastic schools, 68-73
 Monitorial schools, 322, 348-351, 353, 417, 422; plan of, 349; controversy over, 350 f.; in the United States, 351, 404-406
 Monophysites, 84
 Montaigne, Michel, 22, 92, 206
 Monte Cassino, 66, 68, 81
 Montesson, Maria, 287
 Moravians, 372, 382
 More, Sir Thomas, 146, 160, 173, 345
 Morley, John, 218
 Morrill Act, 407, 439, 441 f.
 Morton, Charles, 176
 Mozarabs, 86
 Muhlenberg, Henry M., 381 f.
 Müller, G. E., 265
 Mulcaster, Richard, 170, 172, 188, 346
 Music in education, 9, 21, 27, 34, 36, 38, 48, 58, 71, 75, 133, 171, 186, 188, 214 f., 226; Boethius' schoolbook on, 64; in American schools, 504 f.
 Mussolini, Benito, 294

 NAGEL, 244, 275
 Napier, John, 180
 Napoleon I., 237 f., 276, 296 f., 319 f., 323, 402
 Napoleon III, 301
 National Association of Secondary School Principals, 521 f.
 National Education Association, 418, 437, 479, 483, 514
 National Home Study Council, 548
 National Honor Society, 522
 Nationalism, 141, 292, 404; and school systems, 292; rise of, 293-295, extreme examples, 294; and democracy, 295, in English education, 344, 353 ff.; and sectionalism, 400
 National school systems, 269
 National Socialism, 336, 550 f.

- National Society, of Dr. Bell's monitorial schools, 350, 354
- National Vocational Guidance Association, 517
- National Youth Administration, 518, 548
- Nation-state, 19; and education according to Rousseau, 208 f., and La Chalotais, 218 f.
- Natural punishment, 213
- Nature study, Pestalozzian, 241 ff.; in American schools, 467-470; definition of, 467 f., spread and influence, 469 f.
- Nebuchadnezzar, 13
- Neeb, Joseph, 244, 246, 462
- Negroes, separate schools for, 434 ff.; progress of Negro education, 438 f.
- Neighborhood schools, 369, 378, 382, 388
- Neo-Platonism, 61
- Nestorians, 85
- Netherlands, 95, 134, 139, 144, 147, 155; influence in United States, 160
- Newcastle Commission, 355 f.
- New England Association of Colleges and Preparatory Schools, 513
- New Haven Gymnasium, 337
- New Testament, 61, 146 ff.; Greek version of, 150 f., vernacular translations, 151, 159
- Newton, Isaac, 180
- New York City, public school system established, 405
- New York College for the Training of Teachers, 474
- Niccoli, Niccolo, 120 f., 124
- Nicholas V, Pope, 118, 121, 123 f.
- Nicholas of Cusa, 149
- Nicolovius, G. H. L., 322
- Niederer, John, 237
- Nonconformists, English, 346 f.
- Normal departments, in state universities, 448
- Normal schools, 246; French system, 298; under the July monarchy, 300; attack upon, under Napoleon III, 301; expansion by Third Republic, 304; restriction of German teachers' seminaries, 325, and more generous regulations, 329 f.; English training colleges, 352; American, affected by German influence, 339; American development of, 445 ff.; objective methods in, 464 f.
- North Central Association of Colleges and Secondary Schools, 513
- Norwich (Connecticut) Free Academy, 501
- Notre Dame, of Paris, 102
- Novice, in monastery, 72 f.
- Nursery school, 287 f., influence upon by Dr. Montessori, 287; development, 287 f.
- OBERLIN, J. F., his infant schools, 269-272, 298; community leader, 270
- Object-teaching, 352, 463; Oswego system, 465 ff.
- Observation of teaching, 352
- Oestreich, Paul, 336
- Office of Education, United States, 444; publications of, 445
- "Old field" schools, 369, 377
- Old Testament, 61
- Olympic Games, 30
- Omar Khayyám, 86
- Oratory of Divine Love, 164
- Ordinance of 1785 and land grants for colleges, 401
- Ordinance of 1787, 402
- Origen, 63
- Oswego Method, 363, 463 ff.
- Owen, Robert, 270 f., 351; and New Harmony Community, 413
- Oxford University, 102 f.; 124, 134, 142, 176, 181 f., 340
- PADUA UNIVERSITY, 130
- Page, David P., 447, 463, 485
- Paidonomos, 20
- Palaestra, 25, 28
- Palestine, 12 f., 43, 83
- Papacy, 60, 90; attitude in school disputes, 99
- Papal supremacy, 140, 143
- Parent education, 195, 237, 278
- Pans, 89, 93, 101 ff., 135, 145; University of, 101, 119, 187, 296
- Parker, Francis Wayland, 449, 467, 474, 476-479, 482, 507; as author, 479; at Quincy, 476 ff., and E. A. Sheldon, 476; democracy of, 477, in Chicago, 479; his relation to Progressive Education, 485
- Parsons, Frank H., 517
- Pastorius, Francis Daniel, 371
- Patrick, Saint, 60, 68
- Paulinus of Aquileia, 73
- Paulsen, Friedrich, 336
- Paul the Deacon, 71, 74
- "Payment by results," 355 f.
- Peabody, Elizabeth, 282, 471
- Peabody, George, and the Peabody Fund, 437 f.
- Pedagogue, 24 f.
- Perce, Cyrus, 447
- Penn, William, educational views, 380 f.; and his *Frame of Government*, 381; also, 402
- Pentathlon, 21, 28, 127
- Pereira, Roderiquez, 203, 215
- Pericles, 23, 28, 30 f., 113
- Perioeci, 19, 20
- Perkiomen School, 372
- Persia, 11, 18, 84 ff.
- Persian Wars, 23
- Pestalozzi, J. H., 195, 202, 204, 225, 230 f., 231-247, 250, 268 f., 272, 283, 322,

- Pestalozzi, J. H.—(Continued)
 methods, 239-245, at Burgdorf, 237, at
 Neuhof, 234 f.; at Stanz, 236 f., at Yver-
 don, 238; influence, 352; his doctrines in
 America, 417, 428 f., 446, 455, 462 ff.
- Peter of Pisa, 73
- Peter the Venerable, 88
- Petrarch, 113, 115, 117-120, 123, 130
- Petty, William, 174
- Pfefferkorn, John, 153
- Pfeiffer, Michael T., 244, 275
- Philadelphia Central High School, 500 ff
- Philanthropinum, 183, 225
- Philo, 61
- Physical education, 20 f., 28, 36, 127, 131, 133,
 202, 321; in the *Emile*, 211 f.; under
 Salzmann, 230, 243 f., Jahn's contribu-
 tion to, 275 f., in schools under Spess,
 244, 279; in the United States, 337;
 under National Socialism, 557 f.
- Picket, Albert, 246, 415, 498, as educational
 journalist, 418
- Pisa, 93, 118; Council of, 143
- Place, Francis, 347
- Plamann, John E., 273, 321 f.
- Planta, Martin, 226 f.
- Plato, 22, 20, 31-38, 43, 62, 113, 120, 251,
 253, 414
- Platonic Academy, 121
- Platonism, 414
- Plato of Tivoli, 81
- Platter, Thomas, 148
- Play in education, in ancient Greece, 21; fa-
 vored by Comenius, 195; later theory
 and practice, 284 ff., in Froebel's system,
 286
- Plutarch, 46, 130, 133, 205
- Poggio Bracciolini, 118, 120, 144
- Porter, Noah, 384
- Port Royalists, 165
- Potter, Bishop Alonzo, 415
- Practical education, 45, 97, 107; Utopians'
 views on, 174, Locke on teaching a trade,
 186; in French higher primary schools,
 300; in German continuation and trade
 schools, 328 f.; in England, 358 f.; in the
 high school, 505-509
- Prague, 103, 142 f.; University of, 148
- Presbyterians, 372 f., 382, 387
- Pre-school child, 195, 211 f., 287 f., 269
- Priestley, Joseph, 176, 418
- Primary schools, French, 296-300, 304-306,
 312 ff.; American, 376-386, 411 f., 461-
 492
- Princeton University, 391 f.
- Printing, 124, 145 f., 148
- Prosean, 64
- Professional education of teachers in the
 United States, 445-450
- Progressive Education, 484-492, 539
- Progressive Education Association, 489, 523
- Progress, theory of, 219
- Propaganda for public education, 414-418
- Prussia, 225, 227, 229, 238, 302, 322; kinder-
 garten banned in, 281, school regula-
 tions of, 318, social reforms in, 321
- Psychology, 183; educational, 251-254, 445;
 in preparation of teachers, 329, writers
 on, 334
- Psychology of children, 202, 204 f., 268, 283
- Ptolemy, C., 36, 38, 88
- Public School Society, 404 ff
- Puntans, 176, 346, leavening influence of,
 369 f.
- Purmont, Philemon, 409
- QUADRIVIVIUM, 58, 71
- Quincy, Josiah, 500
- Quincy Methods, 476-479
- Quintilian, 45 f., 48 f., 53 ff., 120, 128 f.,
 144, 261
- RAIKES, ROBERT, 348
- Ramsauer, John, 237, 244
- Ramus, Peter, 188
- Ratke, Wolfgang, 188, 196
- Raumer, Karl von, 325
- Realism, 170-197, 203
- Realgymnasium, 331, 333
- Realschule, 177, 331
- Reddie, Cecil, 335, 360
- Reformation, 113, 135, 139-166, 170, 172,
 318, 346, 373, 383, 393
- Reform Bill of 1832, English, 354
- Regents, New York Board of, 402, 420, 427
- Rehabilitation of veterans, 518
- Reichenau, 68
- Renaissance, 48, 55, 91, 94, 111-132, 171,
 250, 393
- Renan, Ernest, 87
- Rensselaer Polytechnic Institute, 297, 407
- Reuchlin, John, 152
- Reyher, Andreas, 196
- Rhetoric, development by Sophists, 33 ff.; in
 Greek encyclopedia, 38, in Roman edu-
 cation, 48, decay of Roman, 52 f.; one
 of Seven Liberal Arts, 71
- Ribot Commission, 309 f.
- Richards, Charles F., 508
- Richter, Jean Paul, 285
- Rickoff, Andrew Jackson, 465
- Ritter, Karl, 230, 241
- Robert of Chester, 88
- Rochow, Eberhard von, 319
- Roclantsen, Adam, 379
- Rolland d'Erceville, Barthelémy, 308
- Roman Britain, 344
- Romans, The, 8, 9, 22, 26; traits of, 42 f.;
 spread of their culture, 42 f., 48; school
 organization of, 49 f.; their calendar,
 geography, science, 50 ff., educational
 theory, 54 f.; also, 83, 113, 118, 141

- Roman Catholic Church, 8, 42, 58; form of organization, 59; as preserver of learning, 60, 64 ff., in opposition to secular learning, 65; wealth and income at Reformation, 140
- Round Hill School, 337
- Rousseau, 22, 197, 202 f., 204-218, 226, 250, 268, 283, 295, 308; writings, 207 f., plan of state education, 208 f.; analysis of *Emile*, 209 ff., on child study, 475
- Roxbury Latin School, 386
- Royce, Josiah, 256
- Royal Academy of Sciences, Berlin, 177
- Royal Society of London, 177, 183
- Rural schools, 318 f., 400 ff.; delay in development, 404
- Rush, Benjamin, 165, 403
- Russell, William, 246, 418
- Russia, education in, 552-556; statism in 552 f.; progress under Soviets, 553 f.; recent conservatism, 556 f.
- Rutgers University, 391 f.
- Ryerson, Egerton, 466
- SADOLETO, JACOPO, 117 f.
- St. Gall, 68, 144
- St. Paul, Apostle, 59, 61, 117, 146
- St. Paul's School, 150, 188, 346
- St. Peter's, in Rome, 81, 111, 121, 154
- Salamanca University, 187
- Salzmänn, Christian G., 197, 229-231; advice to teachers, 230; books for children, 230
- Sardanapalus, 10
- Saxe-Gotha, 196 f., 227
- Schiller, F. von, 285, 329
- Schlatter, Michael, 382
- Schmid, Joseph, 238
- Scholasticus, 100
- Schoolbooks, 26, 37, 44, 46, 68, 71; by Boethius, 64; by Bede, 68; in the Renaissance, 121; by Erasmus, 150; of the Port Royalists, 165; by Comenius, 189-192; in medieval England, 345; variety of, in early common schools, 425; need for, 544
- Schoolhouses, and equipment, 452 ff.
- School support, 383, 405; varied forms of, 383 f., 421 ff.; land grants for, 401 f., 422; state school funds, 422; of Negro schools, 438 f.; problems of, 541 f.
- School tax, 354, 383, 421 ff.
- Schurz, Mrs. Carl, 471
- Schwenkfeld, Casper, 372
- Science in education, 170; proposals regarding, by the Utopians, 173 f.; scheme of Campanella, 173 f.; changes produced by, 180 f.; in elementary schools, 463 ff.
- Science, development in modern times, 177-181
- Science of education, 181; early American exponents of, 480
- Scotch-Irish, The, 372 f.
- Scotch-Irish schoolmasters, 387
- Scotland, 60, 100, 141; and American education, 160
- Search, Preston W., 480, 487 f.
- Sears, Barnas, 437
- Secondary education, 26, 47 ff., 97, 202, 336; French, 296 ff., 300 f.; French secondary school reforms, 308-312, German, 330 f.; English, 356 f., 359 f., American colonial, 386-391; history of the high school, 496-528; Committee of Ten on, 510 ff.; accrediting plans, 510; standardizing associations, 513 f.
- Seguin, Edouard, 287
- Seneca, Lucius Annaeus, 43, 51, 117, 119 f.
- Semler, Christoph, 177
- Septuagint, 61
- Servetus, Michael, 159
- Seven Liberal Arts, 38, 58, 64 f., 71
- Shaw, Mrs. Pauline, supporter of kindergartens, 287, 471, of manual training, 474; of child study, 475; of vocational guidance, 517
- Sheldon, Edward Austin, 465
- Sheriffhales, 175
- Shrewsbury School, 345
- Sloyd, 474
- Smith, Goldwin, 561
- Smith, Samuel H., 403 f.
- Smith, Dr. William, 382, 391
- Smith-Hughes Act, 518
- Smithsonian Institution, 444
- Snedden, David, 508
- Society for the Promotion of Christian Knowledge, 347, 351, 353
- Society for the Propagation of the Gospel in Foreign Parts, 348, 376, 379 f.
- Socrates, 29 f., 32 ff.
- Socratic Method, 33
- Soldan, Louis, 483
- Sophists, The, 30, 32, 34, 37
- Sosigenes, 52
- Spain, 18, 43, 54, 60, 81 ff.; Mohammedans in, 84; also, 141
- Sparta, 20 ff., 36, 38, 185, 292
- Spencer, Herbert, 213, 253, 285
- Spencer, John Walton, 469
- Spencerian handwriting, 408
- Spens Report, 357
- Speyer School, 488
- Spiess, Adolph, 244, 279
- Spiral plan of teaching, 89
- Spranger, Eduard, 336
- Standardizing associations, of secondary schools, 513 f., 526
- State activity in education, Spartan, 19 ff.; Roman, 53 f., 293; under Charlemagne, 75 f., 293; in the Reformation, 158, 166;

- State activity in education—(Continued)
 in Saxe-Gotha, 196-197; urged by La
 Chalotais, 218 f.; Basedow's plan for,
 227; giving aid to private schools, 351,
 354 ff.; in American states, 402
- State and church cooperation in education,
 293, 318
- State school office, 420 f., 477
- State school systems (U.S.A.), 419-421
- Stationers School, 97
- Statute of Artificers, 345, 373
- Stewart, Dugald, 252
- Stoics, 43, 51, 117
- Stow, David, 271, 352
- Stowe, Calvin E., 246, 319, 322, 337
- Straight, Henry H., 467 ff., 470, 485
- Stubbs, Bishop William, 345
- Student self-government, 521
- Sturm, John, 135, 139; organized classical
 gymnasium, 158; also, 331
- Süvern, J. W., 322, 325, 332
- Sulzer, John George, 202 f., 226, 319
- Sumner, 8 f., 11, 14
- Summer schools for teachers, 448
- Sunday School, 348, 351, 411
- Supervised study, 519
- Symms-Eaton Academy, 387
- Symonds, J. A., 111, 121
- TACITUS, CORNELIUS, 45, 48, 53, 120
- Talmudic school, 86
- Tappan, Henry P., 516
- Tatian, 62
- Tauler, J., 147
- Taylor, J. Orville, 418
- Teachers, 25; privileges of, at Rome, 53;
 early Christian, 63; their political views,
 302, 324; professional isolation in Ger-
 many, 330; professional education of,
 208 f., 304, 329, 334, 352; orthodoxy
 of, 379; salaries of, in United States, 377,
 379, 425, 428, 439; status and prepara-
 tion of, 544 ff.
- Teachers associations, 418
- Teachers colleges, 449
- Teachers institutes, 447 f.
- Tennent, Rev. William, 390 f.
- Terence, 148, 151
- Tertullian, 59, 61 ff.
- Tetzl, J., 154
- Textual scholarship, 151
- Thayer, Gideon F., 426, 484
- Thayer, Vivian T., 489
- Theocritus, 44
- Theodoric the Great, 64
- Theodosius the Great, 54, 84
- Thirty Schools Experiment, 523 ff.
- Thorndike, Lynn, 4
- Thucydides, 23, 31
- Tiecknor, Elisha, 411, 446
- Ticknor, George, 340, 403
- Tiedemann, F., 283
- Tillinghast, Nicholas, 447
- Tobler, J. G., 237
- Trapezuntius (George of Trebizond), 121,
 130
- Trapp, E. C., 229
- Traversari, 121
- Turgot, Robert Jacques, 219
- Turnkunt, 337
- Trilingual colleges, 187
- Turner, Ross, 505
- Tuskegee Institute, 438
- Tyndale, William, 146, 151
- UNITARIANISM, 414
- United States Armed Forces Institute, 548
- United States Military Academy, 297, 444
- United States Naval Academy, 444
- Universal education, proposed, 221, 348, 350;
 as aim, 381; spread of, 534
- Universities, medieval, 101-106
- University of Chicago Elementary School,
 485 ff.
- University of France, founded, 297; under
 Napoleon III, 304; in the Third Repub-
 lic, 306-308; also, 402
- University of Michigan, 510
- University of Pennsylvania, 391 ff.; effort to
 bring under state control, 440
- University of the State of New York, 297,
 420
- University of Virginia, 403
- University practice school, 229
- Urban II, Pope, 89 f.; 154
- Ursuline Sisters, 165
- Utopias of the realists, 173 f.
- VALLA, L., 118, 124, 151
- Varro, M. T., 51, 53
- Vaucluse, 119 f.
- Vegio, Mafeo, 128
- Venice, 93 f., 122, 145
- Vergerius, 118, 125-128
- Vergil, 43 f., 71, 119, 130
- Vernacular schools, 100, 148, 156 ff., 171,
 187 f., 196; in More's *Utopia*, 173; Eng-
 lish, 188, 346
- Vesalius, Andreas, 177
- Vespasian, Roman emperor, 53
- Vespasiano da Bisticci, 122, 124
- Vienna University, 149; city, 155
- Vinct, Élie, 135, 139
- Vittorino, 121, 126, 130-132, 194
- Vivarium, 65, 68
- Vives, Juan Luis, 172 f., 181, 194
- Vocational education, 97, 170, 373; in Amer-
 ica, 369, 406 f., 508 f., 518
- Vocational guidance, 517 f.
- Volkmann, W. F., 264 f.
- Vulgate Bible, 64, 117, 147

- WABASH COLLEGE, 406
 Wadsworth, James, 415
 Wake Forest College, 406
 Waldenses, 142 f., 147 f.
 Walther von der Vogelweide, 152
 Wandering scholars, 148
 Warens, Madame de, 206
 Washburne, Carleton, 482
 Washington, Booker T., 438
 Washington, George, 398, quoted, 415
 Weaver, Eli W., 517
 Webster, Daniel, 427
 Wehrli, J. J., 226, 352
 Weld, Theodore, 406
 Wellington, Duke of, 353
 Wells, David A., 465
 Wessel, John, 149
 Western Literary Institute and College of
 Professional Teachers, 418
 Western Reserve University, 406
 Whitbread, Samuel, 353
 Whitefield, George, 372
 Whittier, J. G., 414, 461
 Wickersham, James Pyle, 378, 437, 447
 Wilderspin, Samuel, 271, 352
 Willard, Emma, 446
 William of Champeaux, 102
 William and Mary College, 387, 393, 440
 William Penn Charter School, 381, 386 f.,
 391
 Williams, Roger, 370, 372
 Winchester School, 345
 Wirt, William J., 482
 Witmer, Lightner, 476
 Wittenberg University, 148, 153 f.
 Wolff, Christian, 253
 Wolke, C. H., 220
 Woodbridge, W. C., 352, 406, 418
 Woodhouse, John, 175 f.
 Woodward, Calvin Milton, 479 f.
 Workers Educational Association, 548
 World War II and education, 490, 492
 Worthington, Thomas, 415
 Wundt, Wilhelm, 340
 Wychffe, John, 142, 144, 147, 345 f.
 Wyneken, Gustav, 335
 XIMENES, CARDINAL, 151
 YALE UNIVERSITY, 391 f.; effort to bring un-
 der state control, 440
 York, monastery of, 69, 74
 Young, R. F., 357
 Yverdon, 231, 238, 244, 352
 Youth Congress, 335
 Youth Movement, German, 335 f.
 ZAY, JEAN, 311
 Zeller, Karl A., 322
 Zeno, 31, 39
 Zurich, 158
 Zwingli, Ulrich, 158